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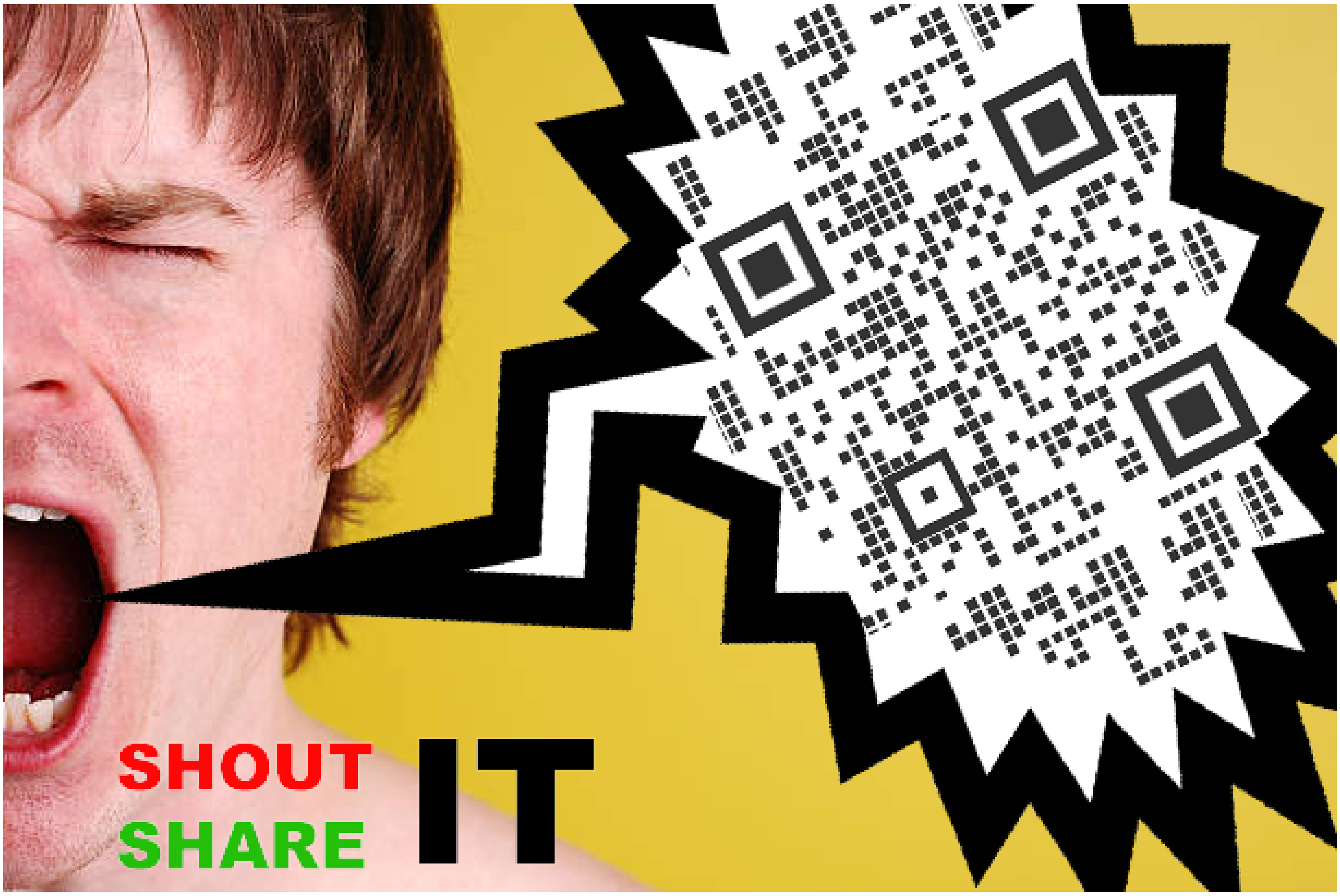
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A MONTHLY

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AND

DESIGNED TO IMPROVE THE SOIL AND THE MIND.

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THE CULTIVATOR.

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THE CULTIVATOR has been published twenty-seven years. A NEW SERIES was commenced in 1853, and the eight volumes for 1853, 4, 5, 6, 7, 8, 9 and 60, can be furnished, bound and post-paid, at $1.00 each.

TERMS—FIFTY CENTS A YEAR.—Ten copies of the CULTIVATOR and Ten of the ANNUAL REGISTER OF RURAL AFFAIRS, with one of each free to the Agent, Five Dollars.

"THE COUNTRY GENTLEMAN," a weekly Agricultural Journal of 16 quarto pages, making two vols. yearly of 416 pages, at $2.00 per year, is issued by the same publishers.

The Object of Agricultural Reading.

That "there were heroes before Agamemnon," and Good Farmers previously to the days of Agricultural Journals, are both indisputable facts. Men breathed the air, and were drowned in water, and drank wine, before they knew from one another the elements which enter into the composition of each, or had studied the action of the lungs and the chemistry of digestion. "Are we the richer," queries Lord Bacon, who with all his love of *theory* thus sturdily stands up for the priority of *practice*—"are we the richer by one poor invention, by reason of all the learning that hath been these many hundred years? The industry of artificers maketh some small improvement of things invented; and chance sometimes, in experimenting, maketh us to stumble upon somewhat which is new; but all the disputation of the learned never brought to light one effect of nature before unknown. *When things are known and found out*, then they can descant upon them, they can knit them into certain causes, they can reduce them to their principles. If any instance of experience stand against them, they can range it in order by some distinction."

What was more broadly true in other Arts, before Bacon's time, remains in great measure true of Agriculture still. Practice precedes Science. It is the business of Science to explain the things that "are known and found out" in Practice; and these things, and the progress of Science in their explanation, it is the business of the Agricultural Journal to record and render as widely accessible as it can. We venture to assert that the best farmers who lived in the era before Agricultural reading was within reach, neglected no means they did possess, of informing themselves as to the practice of others—not only in their own neighborhoods but also in other lands. We doubt moreover if they did not—each as he was, more or less, a "learned man," endeavor to "knit into certain causes" the events of his daily life, and to "reduce to their principles" the teachings of his constant experience. The fruits of these latter efforts, indeed, are seen in many a maxim which still retains its hold upon the popular credence, even when subsequent investigation or the progress of learning has shown it to be totally at variance both with probability and truth.

The point to which we are coming, and to which it appears no more than *seasonable*, as well as reasonable, that we should ask especial attention at this time, is the groundlessness of two objections which are frequently urged by farmers when the importance of reading an Agricultural journal is pressed upon them—namely, that they "already know more good farming than they can put in practice," or that there "were just as good farmers fifty years ago, when no one thought of a farmer's paper, as there are now."

The truth is—and it is well expressed by Mr. Mitchell in his late New-Englander contribution—"the best farmer then, as the best farmer now, is the man who has the largest practical familiarity with the great class of facts, whether scientific or experimental, which has a bearing upon his trade. This class of facts," he continues, "is enlarging every year;" to keep up with their progress the farmer is now offered the simplest and cheapest of all ways, in the Agricultural journal—and it is the very purpose of the facts and opinions therein narrated to point out *how* the good farming that is old and already known, *has been and may be* renewed in the successful practice of the individual—to adduce hundreds of "instances of experience," which each, according to his own circumstances, "can range in order by some distinction."

Mr. Mitchell more than intimates, it is true, in the article just quoted, that "Youatt and Liebig's Letters, and Johnson's Muck Report, and files of the COUNTRY GENTLEMAN and Homestead," or "all the best implements," or "a few calves from Mr. Thorne," will not—alone or together—serve the purpose of "that business tact, and energy, and shrewdness, which are, after all, at the bottom of all good farm management." But the possession of these, is the gaining of *just so many additional points* in the competition with one's fellows. Mr. M. is right in asserting that "ignorance of the principles on which good farm practice rests, is quite consistent with an adroit management of a great many practical and patent truths," but he is none the less correct in assuming that "THE BEST cultivators of any country or age have invariably wrought up to the topmost level of the science and information of thei day."

We do not, then, represent a "file of the COUNTRY GENTLEMAN," or all the volumes of THE CULTIVATOR as a universal panacea for bad farming, any more than we regar anybody's superphosphate as a universal preventive of ba crops. But we do regard either as shedding a light upon the "things that are known and found out" in practice, to go back again to the Baconian quotation—which no farmer who desires to be on a "level with the science and information of his day" can afford to be without; *and it is now just a time of year when we are compelled to ask the aid of every reader who agrees with us, in extending this opinion—the more widely the better—among his friends.* Scattered as our subscription list is, through every State and Territory,—there is abundant room for its great extension by a very little effort on the part of individual readers; and in again renewing our expression of thanks to those who have thus exerted themselves in the past, it is in the confident hope that their example will give rise to its own more general imitation in the future, and that both The Cultivator and the Country Gentleman will be welcome visitors at many more firesides during the coming year than ever before.

We may remind those who kindly undertake the task of extending our circulation, that any who decline to subscribe for the Country Gentleman on account either of its price or because "they would have no time to read it," will obtain in The Cultivator, monthly, a less frequent visitor which they can surely find the leisure to consult, while in point of price, as compared with the amount and value of its contents, we have no hesitation in ranking it as the cheapest Publication in this country. "For five years past The Cultivator," says an Ohio subscriber, whose letter comes to hand as we write, "has made its monthly visit at my house, *without an omission*, and at each visit has come filled with so much valuable information that I regard it as a *necessary of life.* A few neighbors and friends have read it for several years, and I intend that more of them shall do so, for its cheapness places it within the reach of all, and certainly no farmer can AFFORD to do without it. I have some neighbors who are 'wise in their own conceit,' and despise book farming; but let them have a sick calf, and they are ever ready to look over my volumes of the The Cultivator."

The club rates of The Cultivator are *Ten Copies, together with the* Annual Register *for* 1861, *to each subscriber*, for $5; and any subscriber to the Country Gentleman, making up such a club for the *Cultivator and Register*, will receive a copy of the Register for himself, and be entitled to his Country Gentleman for one year at the club rate of $1.50.

Clubs for either the Cultivator or the Country Gentleman are addressed to each subscriber individually at different post offices, if so desired. Subscribers in the tish Provinces are reminded that 6 cents must be added for each Cultivator and 25 cents for each Country Gentleman, to prepay American postage to the lines. The Club Terms of the Country Gentleman and inducements to Subscribers to The Cultivator, will be found on page 38.

Exports of Flour and Grain.—There were exported from this country to Great Britain and Ireland, between Sept. 1 and Nov. 16, 1860, 7,799,057 bushels of wheat, while during the same period in 1859, only 183,907 bushels were exported. The flour sent during the same period in 1860, was 584,116 barrels, against 76,290 in 1859—making an increase in the value of wheat and flour—calling the wheat $1 per bush. and the flour $5 per bbl.—of $10,154,280.

"DON'T ATTEMPT TOO MUCH."

The "besetting sin" of a great many people is that they attempt more than they can accomplish—begin to build without considering the cost of finishing the structure planned—and the caution above written, is one as often needed by the farmer as by the members of any other class of community. Especially is it a folly of the farmer to "attempt too much" in extending his labor over a large space; and the more we see of farm management, the stronger is our conviction that concentration in expenditure of labor and capital is the great need of our system of agriculture. The contrary plan of expansion very generally prevails; the farming is "laid on thin," the ground is "run over" rather than cultivated, when, to secure any reasonable profit it only needs to be farmed well and thoroughly, employing no more land than can be fitted for the crop in the best manner.

Just look at the matter. Is it good policy to expand the labor of putting in a crop over six acres, when at the same cost a like result may be realized from three or four? That is, put double the labor in preparation and culture and twice the manure per acre; and, taking out additional cost of seed, rent, and taxes that must be paid, were you to sow the larger number of acres, you will get as much or more profit from the three as from the six. Besides, the satisfaction of looking at and gathering the crop, and the credit it will be to you as a farmer.

It is too frequently the case that a great number of poor animals are kept at no profit, while a few good ones would give a handsome return. A cow which makes only just enough butter to pay for her keeping is a poor investment, when we may as well have one which will do twice as much, and cost no more for pasture and meadow. The same is true of growing stock. Good cattle well fed, will grow and will sell at good prices—"scalawags" are poor property to the owner, hard to keep, and still harder to dispose of at cost, to say nothing of profit. Better two or three good calves than a dozen stunted scrubs; better a few prime sheep than a large flock of worthless ones; better to count value than number, and bushels and tons than acres, with only light crops.

Farmers attempt too much when they furnish other interests with capital to the neglect of their own farms. There is no outside investment equal to one judiciously made at home. Draining, manuring—all real improvements—return better interest than stocks or mortgages, and should employ the capital of the farmer.

A New Tomato.

The *Gardener's Chronicle* of Nov. 24, thus notices a new tomato, recently produced in France:

It appears in a circular from Messrs. Vilmorin that they are offering seeds of A NEW UPRIGHT TOMATO, which requires no support. This plant is said to be entirely different from the kinds previously known. Its stem is two feet high or more, quite upright, and so remarkably strong and stiff as to be strictly self-supporting—a highly commendable quality. It branches less than the common great red tomato, is less leafy, and does not want so much pinching. The leaves are rather curled, much puckered, very firm, and closely placed on the sturdy branches. Their color is a remarkably deep shining green. It does not bear so freely as the common tomato, but its fruit, which is of the same color, is larger and more regularly formed. In earliness it is intermediate between the Early Red (*rouge hative,*) and the Great Red (*rouge grosse.*) It was raised from seed by Grenier, the gardener of M. de Fleurieux, at a place called the Chateau de Laye, wherefore it is to be called the *Tomate de Laye.*

The Cultivation and Management of Sandy or Light Soils.

In almost every section of our country there are tracts, of greater or less extent, of sandy, gravelly, or light loamy soils. Even in New-England, notwithstanding the mountainous and rocky character of many sections of it, in the aggregate there is within its limits immense quantities of light sandy lands, which generally, when spoken of, are designated as "pine lands," as the original forest growth when the country was first settled, was mostly composed of the white and other varieties of pine trees. These soils are the result of past geological agencies, and by geologists are termed drift or diluvial, while the lower-lying lands, bordering our rivers and smaller streams, are called alluvial soils—in some sections they are termed "bottom lands;" in other, intervales. The alluvial or intervale lands are frequently the most productive and valuable lands we have, though they vary somewhat in natural fertility and agricultural value.

The diluvial or sandy soils, generally forming the second terrace above the rivers, vary greatly in their natural fertility and agricultural value, aside from their nearness to or remoteness from markets. These differences are generally owing to the chemical, mineral and physical composition of the earthy materials forming them; some of which, if they can be called soils, consist almost entirely of fine silicious sands, barren or destitute of vegetation of any kind. Large tracts of such are found on Cape Cod and elsewhere. There may be particular locations and other conditions where the reclamation, by heavy dressings of clay or muck and manure, of such "blowing sands" may be made to pay; but as long as the best of land in unlimited quantity can be purchased at $1.25 per acre, most of these sands had better be left to the sport of the winds.

We do not now recollect of having seen any published account of extensive and valuable improvements, being made upon these barren sands in this country; but in the course of our agricultural reading we have been made acquainted with many extensive and profitable improvements of the better qualities of these light soils; and these improvements have been made in various sections of this and other countries, and by different methods, and of course at great difference of cost, but generally we think they have returned a fair profit for the outlay; and it will be our object in this, to lay before our readers some account of the various methods that have been pursued by different farmers to improve and render fertile and productive much of the badly managed and worn-out light soils under consideration, for they possess some valuable inherent qualities over clayey and other stiff heavy soils. They are easily plowed and cultivated; they require no drainage, and though light and dry, are quick and kindly, and in wet and otherwise favorable seasons, they usually yield good returns for the labor and manure bestowed upon them. In some sections of the country, particularly in portions of New-England, the past season has been wet and cool, so much so that immense quantities of corn there, on strong upland and clayey soils, failed to mature, while in the same neighborhoods the "pine lands" have given good crops of sound well ripened corn. And it is the opinion of many good farmers with whom we have conversed, that taking a series of ten years in succession, Indian corn can be grown at a greater profit, or cheaper per bushel, on these sandy plains, than it can be on the stronger rocky upland soils. The profits in favor of the light over the clayey or otherwise stiff soils, are in consequence of the greater ease and facility with which they can be plowed and the crops cultivated, when contrasted with the more compact and heavy soils alluded to. Our usually hot summers and occasional severe drouths, are sometimes a serious obstacle to the profitable culture of these light and naturally drained lands, but by judicious management much may be done towards averting the ill effects of drouth, to which we shall allude in course of our further remarks.

In the hottest and dryest portions of our summers, there is an immense escape of water in the form of vapor from an acre of sandy soil. Could a moiety of this be retained for the use of the crops, but little injury would result from lack of rain.

In many locations clay is found in the vicinity of sandy soils, and can be most profitably used to improve them. "For this purpose," says Allen's American Farm Book, "the clay should be thinly spread in autumn upon sward land previously plowed, and the winter's frost will effectually separate the particles. It should then be harrowed thoroughly and deeply in the spring, and subsequently plowed if necessary. Such a dressing on a light crawling sand is more than equivalent to an equal quantity of the best manure, and will be permanent in its effects. Clay and sand are necessary to each other, as they both contain qualities which are essential to a good soil, and that will always be found best which has the proper proportion of each."

But there are thousands of localities where clay cannot be profitably employed in the improvement of light soils. The use of clay would prove too expensive in consequence of the great distance it would have to be carted.

Wood ashes, either leached or fresh, in some places can be obtained in large quantities, and at reasonable rates, especially at the pot and pearl ash factories. Leached ashes contain but little potash compared with the unleached, yet they have in their composition all the inorganic or ash constitutents of our cultivated crops, and their application to light dry soils, generally exhibits very favorable and marked effects, much improving their moisture-retaining qualities, and highly favoring the growth of corn, grain, &c. But the farmers should always bear in mind that the tendency of ashes, lime, plaster, or even guano, when applied alone, is to hasten the exhaustion of tillage land—or rather, it is the increased "crops, or what is taken off the soil in the removed crops, that exhaust it." Therefore their use should always be accompanied with farmyard manure, prepared muck, or the turning in of green manure, such as clover, buckwheat, oats, cow pea, &c.

We have at different times read the published accounts of the great improvement made by Adam Anthony upon a worn out sandy farm in North Providence, R. I. In 1826, when Mr. A. came into possession of it, "the farm was in very poor condition. There probably was not more than six acres that would have defrayed the expense of cultivation for one year only. The crops that year were five tons of hay, two of oats, and three tons of bog hay scarcely worth the cost of procuring; no corn, and about 200 bushels each of potatoes and turnips." "Prior to the period above alluded to, the sandy portion of the farm had been occasionally planted with corn, the crops on an average yielding about eight bushels to the acre. It afforded nothing for the scythe, and of little value for grazing." "The crops obtained in 1838, from 63 acres, were 100 tons of hay, barley and millet, corn fodder and green stalks, equal to five tons of hay; 12 tons of pumpkins, 175 bushels of corn, 400 of potatoes, 330 of turnips, 30 of beets, and a supply of other vegetables for the table. The potato crop that year was a failure. In an ordinary season the yield would have been from 1,500 to 1,800 bushels."

Excepting 20 cords of manure purchased in 1827, no manure, except ashes, has been bought for the farm. Of these about 900 bushels annually on an average for the last thirteen years. [We presume the ashes were from the soap makers, after having been leached, as there was about 200 bushels per acre applied.]

Ashes have been the *basis* in the improvement of the sandy and most sterile parts of the farm. The land was plowed, ashed, and millet and southern clover seed sown, finely harrowed, and *finished off with a heavy roller*. The millet averaging 1½ tons per acre; the clover was mown one or two seasons. Then followed by ashes, millet and clover. Two or three of these rotations would prepare the land for the corn crop. With the application of 30 loads of manure, his corn crop averaged 50 bushels per acre. Under this course of treatment the fertility of the land was continually augmenting and the balance sheet exhibited profitable results.

But it is not every farmer that is located in respect to markets, and the facility of procuring ashes, as was Mr. Anthony; but still his example, and the improvements in the crops and the once barren soil of his farm, are not without their use, especially to those farmers who can procure leached ashes from the potashery and the soap boilers at reasonable prices.

Green manuring, or the plowing in of green crops in their living state, for the improvement of light soils, is successfully practiced in many of the European States, and to a considerable extent in this country. Allen, in his Farm Book, says—"lands in many of our eastern states, which have been worn-out by improvident cultivation, and unsaleable at $10 per acre, have by this means, while steadily remunerating their proprietors by their returning crops, for all the outlay of labor and expense, been brought up in value to $50 an acre."

But he thinks the full benefit of green crops as manure seem only realized where there is sufficient lime in the soil; but adds—gypsum and ashes are the best substitutes when lime or marl is difficult to be procured.

Where the soil is sufficiently fertile to grow clover with the use of a bushel or two of gypsum per acre, it is a profitable plant to cultivate for green manuring. The seed is not expensive, its growth is certain and rapid, producing a large amount of stalk and leaf, and an abundance of long tap and other roots, which, when the subsoil is favorable, penetrates the ground to a great depth. The southern seed, when sown alone in April, will be in full bloom by the last of August, ready for the scythe or plowing in. Whether the western, southern, or northern seed should be sown for green manuring, can best be determined by comparative experiments. There is a difference of opinion among farmers, whether it is better to plow in clover while in blossom, or defer it till the seed has matured. When turned in, in its green state, the decomposition of the vegetable structure is more rapid, and there is a greater evolution of gases and acids, and their action upon the mineral constituents of the soil, (potash, lime, soda, &c.,) is more energetic than that of the ripened clover. But if the plants are suffered to mature their seeds before plowed in, their decomposition will be less rapid, the amount of inorganic matter stored in the ripe clover will be greater, and there will also be a larger per centage of woody fibre; besides, the matured crop carries with it a full supply of seed for future growth. The late Col. John Taylor of Virginia, strongly advocated the plowing in the matured clover, in preference to turning it under in its green state. The farmer can readily try the two methods; two or three carefully conducted experiments would decide for him the most profitable course to pursue.

The Cow pea is deemed one of the best of fertilizers in some of the southern states. But we are not aware of its having been used for that purpose at the north.

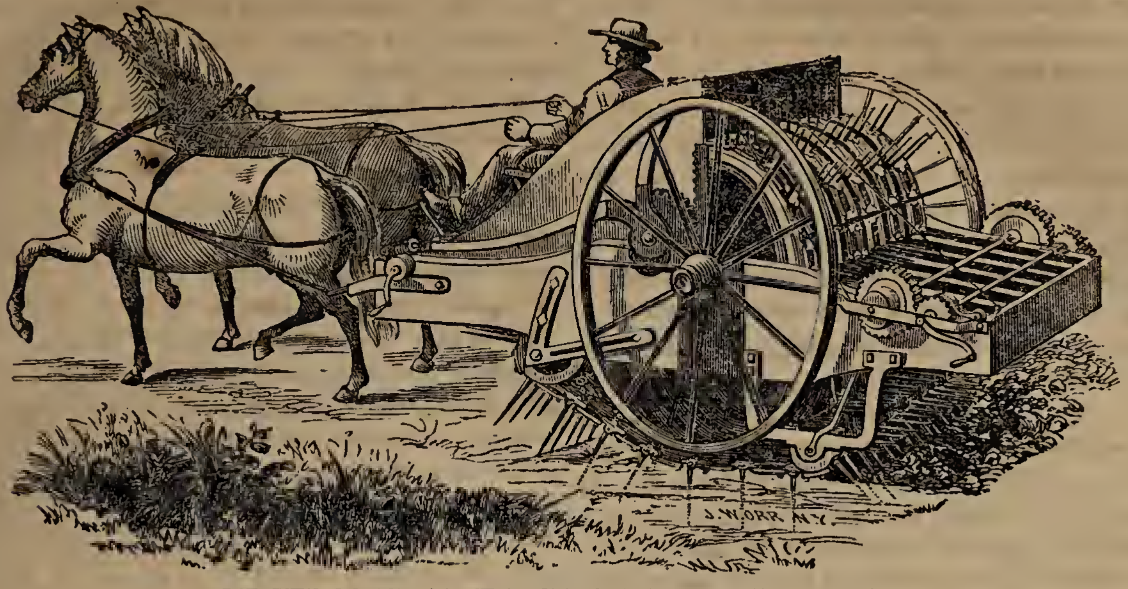
To countervail the injurious effects of drouth on light soils, there is practically nothing so effectual as the inversion of a close compact sod. The plow to be used for this purpose should be one which completely inverts and shuts in the furrow slice. The plowing should be followed by a heavy roller; there is little danger of getting the sod too compact, for it keeps the rising moisture below it from escaping—the decaying vegetable matter of the sod, sponge-like, retaining the moisture. The roots of the grain, grasses, or other crops upon the inverted soil, will penetrate the moist sod and keep the plants fresh and green, while the same plants on similar soils destitute of the inverted sod, will suffer severely for lack of moisture. To obtain a close sod, red top and June grasses are the best.

Some years ago we read in the New-England Farmer, some account of the great success attending the cultivation of large tracts of poor worn out pine lands in Northampton, by Col. W. Clarke, Jr. About that time we wrote to him upon the subject; in return, he kindly furnished the desired information. His course of culture was—"In the latter part of August and early part of September, with a good plow, to completely invert the sod, if there was any, then press down the furrows with a heavy roller; harrow the ground and sow with timothy and red-top seed, and then again used the roller." He remarked, "without the use of a *heavy roller* in the culture of these light soils, I consider them of little value; but with its use, I think them the most profitable lands we have, except some of the alluvial soils, that annually or oftener, receive by freshets, rich deposits of sedementary matters."

If there was a tolerable sod on the land when plowed, he seldom failed of obtaining from one ton to one and a half tons of prime hay the year after seeding. Where the land had but little sod, the crop was much lighter. This was neither mown or fed off, but all plowed in and the land new seeded, and a good crop was sure to follow. It was seldom that he applied manure when seeding down, though he had in a few instances applied a dressing of fine manure with good results. In treating land in this way, we think it would be well to sow clover and honeysuckle seed in the spring following the seeding, and apply one or two bushels of gypsum.

It is well known that on some soils gypsum fails to give any increase to the crops, while on others it produces wonderful effects. Experiments will determine the "profit or loss" of applying it to each farmer's soil. Wherever it produces such magical effects as above quoted, it is the most economical way of improving "worn-out sandy soils." Where this kind of land is so situated as to be irrigated, it is cheaply made to produce most profitable crops of hay, and the more sedimentary matter, especially if of a clayey nature the better.

We have thus written largely upon this subject, because we believe, under judicious management these light soils, taking a series of years together, are more profitable for cultivation than the rocky side hills of much of the arable lands now cultivated in New-England and elsewhere.



O'RIELLY'S AMERICAN TERRACULTOR.

On the 7th instant several gentleman were invited to witness at Rochester the operation of a new machine for loosening and pulverizing the soil, which has been constructed under the care of Henry O'Rielly, Esq., widely known for his energetic and successful labors in extending the lines of telegraph throughout the United States. This machine combines the essential features of Evans' Rotary Digger with Vernam's improvement on spading machines, and its object is a deep and thorough pulverization of the soil, not by simply inverting, as with the plow, but forking it up, and tearing it to pieces down to a depth of eight or ten inches.

The trial was made on the grounds of Ellwanger & Barry, two miles south of the city. The soil was a medium loam, free from stone, and the ground had borne a crop of carrots, which had been harvested some time previously. The surface was uneven, and the soil wet by the abundant rains. The machine was entirely successful in its operation, and reduced the soil to a condition quite similar to that of spading or forking, except that it did not invert it, but scattered and intermixed all portions promiscuously.

We need not describe minutely the machine, but shall merely point out the principle of its operation. The cut which we have given would convey a tolerable impression of its appearance, if the seed box behind (with its compartments) were entirely removed, and the heavy box frame were replaced with a lighter one. A series of endless chains are furnished with projecting teeth, like harrow teeth, and by revolving on drums or cylinders, pass around with the same velocity as the horses move onward. The teeth, which are about ten inches long, are thrust down into the soil by the machine, and remain there without moving until the moment they revolve around a low cylinder or roller behind. The short turn which the chains make in passing around this roller, causes the projecting teeth to sweep round in a larger circle, and thus to move three or four times as fast at this point as the chains which hold them. As a necessary result, this increased motion tears the soil to pieces and tosses it backwards.

The machine had been made very heavy in order to guard against breakage on its first trial. The manufacturers are confident that all necessary strength may be given, even if the whole weight were reduced 800 pounds, making it about a ton and a half, instead of nearly two tons, as it now is. It was drawn by six horses, although but four had been used. It pulverized handsomely a strip of land forty inches wide at each passing, and would consequently go over an acre in an hour, at a speed of two and a half miles an hour, if the team could endure it. When the horses walked rapidly, a portion of the earth was thrown off behind two feet high; when they walked slowly, it was thrown only a few inches. The pulverization was, of course, more complete in the former instance. The soil was left as loose as it could lie, the whole motion being to raise it, instead of pressing it down, as with a harrow, or crowding it into a mass as in plowing.

The advantages of this machine, as they appeared to us at the time, are:

1. It throws the soil up and loosens it thoroughly, instead of pressing it down as in harrowing, &c.

2. It forms no subterranean crust, as is always done by the sole of the plow, and the tread of horses' feet in the furrow.*

3. The teeth clear themselves completely of all obstructions, and cannot clog, in consequence both of the centrifugal force which they give to the soil, and by their sudden expansion asunder as the chains pass around the lower cylinder.

4. Its working is not attended with the heavy friction between the sod and mould-board always existing in plowing.

5. By taking a wider sweep of land at each passing, a single hand is able to direct a larger quantity of work daily than by the use of the single plow.

6. Should culture by steam be adopted at some future time, the use of this machine would be equally adapted to this force, and would not be liable to the imperfect work which the gang plow attached to the moving engine has hitherto made.

On the other hand a prominent drawback is the great weight of the machine—now about two tons, but capable of being reduced to one and a half tons, by lessening unnecessarily heavy portions. We are inclined to the opinion also that both its cost and its weight might be still more reduced by making the drums much smaller, and the endless chains shorter; for we see no advantage in such a large series of teeth standing immovably in the soil at once, the only efficacious part of their working being at that point where they pass the lower cylinder.

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* We lately had occasion to inspect a piece of ground that had been plowed and was soon flooded by a creek, and all the loose or plowed soil washed completely away, leaving this under crust untouched, and showing every mark and scratch of the plow as it passed over. This crust had been made so compact by the whole weight of the plow and that of the turning sod superadded, that the flood made not the slightest impression upon it, although the soil was naturally quite uniform down to a depth of two or three feet.

Further experiment will be needed to determine the relative cheapness of this mode of pulverizing the earth as compared to plowing. In the experiment which we witnessed, the teams would have worked separately and plowed as much ground, to nearly an equal depth, and with the same case; but when the machine is reduced in weight as proposed, the results may be much more favorable.

The point which appears to us especially to need further investigation, and which would determine more or less its future value, is:

1. The relative force of draught required (by using the dynamometer) to draw the machine when the teeth are out of the ground or not working, and again with the pulverizing process going on—in order to determine the *actual force* needed to cultivate a given depth and breadth as compared with the same work done with the plow. This is a very important point to ascertain, and has an essential bearing on the economy of the forces. If the power of the wedge in the plow is more than overbalanced by the friction of the weight on the sole, and of the sod on the mould-board, rotary cultivation should be sought as the most economical of labor, independently of the other advantages we have mentioned.

This machine cannot work on stony ground—its weight and complexity, (and consequent cost,) appear to be the prominent objections. We think, however, these might be greatly lessened; and we are not sure but that when perfected it may become the very best machine yet devised, especially in connection with steam power, for the culture of the prairies and great farms of the west. At all events, the thanks of the entire country should be awarded to Henry O'Rielly for his enterprize and energy in this effort to find an improvement on the mode of pulverization, which has now remained essentially unchanged for thousands of years.

WATER-PIPES.

Messrs. L. Tucker & Son—For 30 years or more we have been conveying water into our barn and kitchen yards, a distance of some 600 feet, through logs bored out with two-inch auger made for the purpose—boring out one end of the log with a hob or taper auger—tapering down the other end so that one end of a log may be driven into the end of the other, thus making a water-tight joint about every twenty feet, the logs being that length; but these rot and get out of repair, and are a frequent trouble.

We want something more durable, and not so costly as iron or lead.

Is there not a clay tile or pipe that we could use with less cost? From the stream where the water enters the pipe to the barn-yard, there is a descent of some 10 or 12 feet—thence to the dwelling is an ascent of some 8 or 9 feet. Perhaps thus there is considerable pressure on the pipe in its lowest parts, and every joint must be perfectly tight. Can the clay pipe be made so? They would be covered beneath the ground so deep as not to freeze. Would covering them up in dirt be likely to cause them to moulder, or soften and become worthless in a short time?

If there is such pipe, how are they put together? Where to be had? Can a discharge pipe be inserted wherever desired? How long will they last, and what do they cost? Any information you can give on the subject will be much esteemed by A Querist. *Greenville, Tenn.*

If *durable timber* is selected, and the logs laid so deep as to be entirely beneath the reach of frost and the danger of displacement, pump logs afford perhaps the cheapest conveyance of water for short distances and with little pressure or head.

We have heard of a clay or earthenware pipe, but do not know where it is made, nor any facts in relation to its success or failure.

Where the flow of water is considerable, we have found the following a good and cheap mode of conveying water, provided good cement is to be had:—Provide a quantity of common pipe tile, such as used for ditching, of the smallest size—ours was less than two inch bore. Cut the ditch to a narrow smooth trough at the bottom—lay down an inch of freshly mixed hydraulic or water-lime mortar—press the tile slightly into this mortar, and then with a trowel cover the sides and top with the same mortar laid on about three-fourths of an inch thick. A rope covered with cloth so as to make it just large enough to fit the bore of the tile, must be drawn forward through it, as the laying progresses, to wipe out the inside smoothly, and prevent mortar from protruding through the cracks. After drying enough, the ditch is filled. If an inch or two of water-lime mortar were made to surround the tile, and it were allowed some weeks or months to become thoroughly hardened, doubtless it would bear the eight or nine feet pressure which our correspondent mentions; but we think in this case it would be most prudent to apply a second coat of mortar, to guard against leakage. The smaller the tile, the less the surface of pressure, and the safer it will be from giving way. Well burned tile will never soften in the soil. Tile with about an inch and a quarter bore might be made expressly for this purpose, and would make an excellent channel. It should be safely a foot below the deepest freezing.

A discharge pipe may be inserted at any place, but the water should flow through it unremittingly, as successive checks are apt gradually to deposit sediment.

[For the Country Gentleman and Cultivator.

Husking Corn---Who Can Beat It?

During the past week there has been a little strife here among huskers, to see how much one could husk in a given time, and Luke Divine, a young man of 21 years, who works for me by the month, husked in one forenoon, and quit at 12 o'clock, *forty bushels*, and bound up all his stalks but five stooks. I superintended the measuring of it, keeping tally with my own pencil, and I know the measure was correct and liberal.

The corn was of the white-flint variety, and grew on a portion of an old field from which every thing has been removed for more than forty years, and nothing returned to the soil until within a few years past. All who saw the corn while it was standing, affirm that there was no such corn in this region, notwithstanding we have had a poor season for Indian corn.

Now if any man or boy can beat this, we shall be pleased to hear from them, through the Co. Gentleman and Cultivator. S. Edwards Todd.

Lake Ridge, Tompkins Co., N. Y.

Mulching Wheat with Buckwheat.—A writer, quoted in the Genesee Farmer, advocates sowing buckwheat with wheat in the fall to afford it protection in winter. He says the buckwheat will often grow two feet high before the frost kills it. It will catch the driving snows, and prevent the winds from sweeping the earth away from the tender roots on light lands. It protects the plants from heaving out by the frosts, and affords nourishment as it decays in the spring to the wheat when it most needs its aid.

[For the Country Gentleman and Cultivator.]

Home-made or Cheap Cattle Scales.

I have made me some cattle scales, and thinking them cheaper than Fairbanks' best, (first cost alone considered,) and correct enough for most uses, and also within the pecuniary reach of "small-fisted farmers," I will give my method of making them.

Take two pieces of tough ash timber, 2½ inches square and 88 inches in length, and put your fulcrum at one end and your weight 8 inches from the same end, and the hook of a pair of common steelyards (or what is better, a scale beam) at the other, and you have the principle.

If you lift one pound at the long end you will lift ten pounds, placed eight inches from the other, (exactly not counting the weight of the stick;) therefore if your scale bar (in weighing) indicates 2 lbs., annex a cipher which makes 20, and 3 lbs. 30, &c., 2½ 25, 2¼ 22½, 2¾ 27½, &c., or in other words, multiply by 10.

Now for a platform for your cattle to stand on. The annexed diagram of the levers or arms, with the platform removed, will help to illustrate.

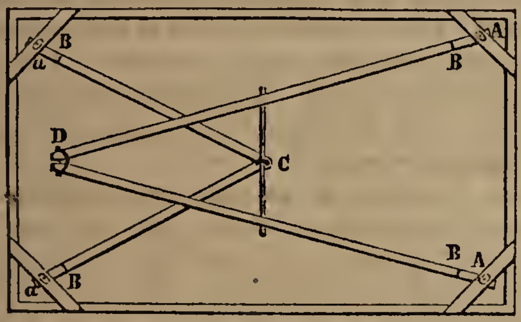

Fig. 1.

A. D. are the long arms, 88 inches in length, and A. C. are two short arms a little more than half as long as the long ones, as they have to come together at the point C, which is just half the distance from a to A.

The short arms must be under the long ones and be fastened to them at C., as in the figure, but not solid as they must swing. The outside frame is made of plank 2 by 8 inches, which makes the frame 8 inches in height, and it ought to be 4 by 8 feet in width and length.

The points A. A. hang under a strip of plank 1½ by 8 inches, which is fasened across the top of the frame.

The points a. a. are hung under the pieces which are fastened across the corners, and which are let down into the frame. The platform is made of 1½ inch bass or pine plank, about 7 feet long and 4 wide, with three strips or cleats across the under side.

The two end cleats of the platform are provided with steel sockets under their ends, which rest on the steel points of the levers at B. B. B. B. Have four clevises made, with each a staple or bolt 3 inches long with an eye in one end to put the clevis through and a nut on the other end. The clevis pins are made of steel, of the size and nearly th[illegible] of a common three-cornered file, which are put [illegible] the ends of the arms at A. A. a. a. The staples are then put up through the pieces, which are across the top and corners of the frame, and the nuts screwed down tight.

Remember the arms and platform must swing, and the staples at a. a. must be an inch or two longer than the others.

At the end of the frame near a. a., fasten two pieces E. E. (fig. 2,) upright about 3 feet high, with a strip 2 by 4 inches across the top to hang the scale bar on. The upright pieces are to be fastened to the side-pieces of the frame, directly opposite a. a., so that the cross-piece shall be over the point D. (fig. 1.)

The staple which goes up through the cross-bar F. (fig. 2) should have a nut on its upper end so that if the chain G. (fig. 2) is too long or too short it can be remedied by turning the nut. This staple should be as far to the left of the center as the distance is between the pivots of your scale bar, fig. 2. (The chain G. is to be fastened to the end of the long arms or levers at D., fig. 1.)

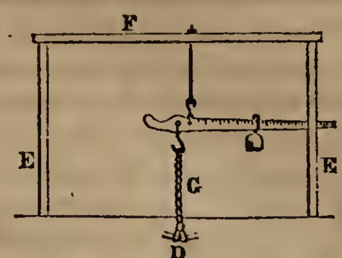

Fig. 2.

The expense of the irons is from $3 to $4, and any carpenter can make the rest in a day.

It will require some skill to hang them exact, so that the scales will balance alike when the weight is changed from one corner to another.

The points B. B. must be farther from a. than from A.

A scale beam, which will weigh 400 lbs. costs about $3—that will weigh on my scales 2 tons.

Uses.—A butcher or cattle dealer can guess very nearly what an animal will weigh—much nearer than a farmer can who guesses only four or five times a year and then does not *know* whether he guesses *right* or not. They make money by guessing the weight of the animals they buy.

I think I have saved the price of my scales several times over, in selling by actual weight. I think that many, and perhaps more than half of the farmers, lose more by guessing at the weight of the animals they sell, than to pay for several sets of such scales. What would you think of a groceryman who guesses off the weight of his goods?

You can weigh hay or bags of grain, &c.; in fact they are very convenient for weighing any coarse article.

I stall fed several head of cattle last winter, and I made some experiments in feeding and weighing, and perhaps (if agreeable to you,) I may copy some of them from my memorandum book for your readers. Wm. Pease.

Oswego, Oct. 1860.

No one can make this weighing machine properly, who does not well understand the principle of the lever and its application in the construction of common weighing machines. To make the whole intelligible to all readers, we copy the following short and clear explanation of the principle of the platform scale, from *Thomas' Farm Implements*:—

A valuable combination of levers is made in the construction of the *weighing machine*, used for weighing cattle, wagons loaded with hay, and other heavy articles. The wagon rests on the platform A. (fig. 3,) and this platform rests on two levers at W. W., which presses their other ends both on a central point, and this again bears on the lever D., the other end of which is connected by means of an upright rod with the steelyard at F.

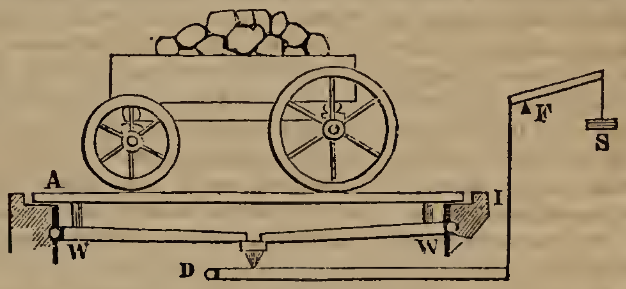

Fig. 3.

There are two important points gained in this combination. In the first place, the levers multiply the power so much that a few pounds' weight will balance a heavy load of hay weighing a ton or more; and, in the next, the load resting on both the levers, communicates the same force of weight to the central point, from whatever part of the platform it happens to stand on; for if it presses hardest on one lever, it bears lighter, at a corresponding rate, on the other. In practice, there are always two pairs, or *four* levers, which proceed from each corner of the platform, and rest on one point at the center. We have taken the two only, to simplify the explanation.

The only difference between the above described machine, and that described by our correspondent, is in the omission of the lower lever D. of fig. 3, by the extension of the long bars in fig. 4, thus simplifying its construction,

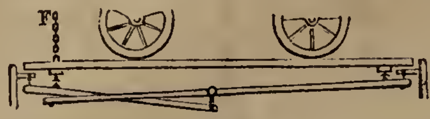

Fig. 4.

and rendering it less liable to get out of order, and better fitting it for construction by the farmer.

We have made drawings from the rough sketches given, and trust we have made no error in doing so.

A detail of the experiments in feeding, to which our correspondent alludes, will be very acceptable.

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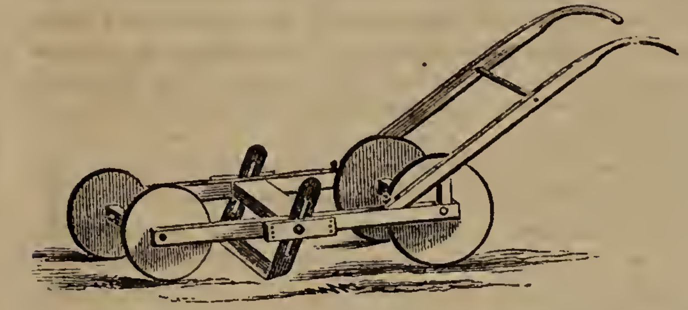
[For the Country Gentleman and Cultivator.]

Implements for Cultivating Root Crops.

Eds. Co. Gent.—With this I send a rough sketch, drawn by my son, of a machine loaned me by one of my neighbors for cultivating between the rows of roots and vegetables, which I think highly useful, and which I do not remember to have seen described, or for sale at any of our agricultural stores.

One great difficulty in machines to work in roots, with me, has been that they cover the plants with earth while cutting up the weeds. The especial benefit in this is, that it can be run close to the rows without doing this.



The drawing will probably be sufficiently plain without an extended explanation. A frame is made of 1½ inches square, hard wood, 2 feet long by 10 inches wide, with two cross pieces framed through the middle. At each end of the frame are wooden axles, the forward one with two small, and the hind one with one large wheel. The knife is placed between the wheels, some two to three inches lower, and as the machine is pushed forward wheelbarrow fashion, it cuts the weeds. The knife is made of an old draw-shave knife, and bolted on the side of the frame in a groove, so it can be raised or lowered, as desired. Its great simplicity of construction is one of its best recommendations, as any one familiar with the use of tools can get one up. The wheels are from 1½ inch plank, and banded with hoop iron. The two wheels forward are quite necessary, to make it run steadily, and not allow it to careen. Wm. J. Petter. *Lakeville, Conn.*

November 10.—Since the above was penned, I have discovered another use to which this implement can be profitably put, viz., cutting off the tops of the carrots before they are pulled. This is done by elevating the knife so it will run just even with the crown of the root, and then running it directly over the row. Perhaps the digging is not done as speedily, but I have no doubt it is a great labor-saving operation. One boy has done them as rapidly as three men could dig, while ordinarily the topping has been just about as expensive an operation as the digging. W. J. P.

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To Destroy Bed-bugs.

Scald the bedstead once or twice a year, and fill all the cracks with corrosive sublimate and lard mixed. Then freedom from such nasty vermin, and sweet sleep at night, will reward your labors. S. D. B.

[For the Country Gentleman and Cultivator.]

Self-Recuperative Power of Worn-out Lands.

Messrs. Editors—Several years ago I made the statement, through your paper, that all worn out lands, and even lands naturally barren and unfertile, possessed the power of self-recuperation. I mean that all poor lands may be brought up to a very high state of fertility from the means produced upon the land, without the aid of any *foreign* manures. I remember that the editor at the time I made the statement, was rather incredulous relative to the correctness of the proposition. I propose now to illustrate not only the *possibility*, but the *practicability* of the thing.

Suppose a man take twenty acres of land, so poor that it cannot, by the most careful tillage, produce more than *ten* bushels of corn to the acre. Now, suppose the man plants the twenty acres, and does for it all that can be done by the plow, the cultivator and the hoe. According to the supposition the field will produce 200 bushels of corn.

Now, suppose that, instead of harvesting the corn, it should all be turned under in the fall to rot, and the field planted again the next year. The second crop would probably not be less than 15 bushels to the acre, or 300 bushels on the field. Let the same course be pursued for ten years, and the whole field would be brought up to the highest state of fertility.

But now, instead of plowing the corn under from year to year, it should all be saved, the stalks and corn, *carefully*. Let the corn be fed to hogs, and the stalks to other animals, and in circumstances that every grain, both solid and liquid, can be saved to be returned to the land again. I say, *again*, when in fact but a small proportion of the grain came from the soil, but from the atmosphere in the form of *carbon*, *air and water*.

By the plan I propose, by adding coarse materials sufficient to save all the urine, the manure made would amount to more than all that was produced upon the field. The loss from the growth of the animals, in this case, would be far less than the amount of the necessary absorbents for the urine. Nothing would be lost, in fact, in the growth of the hogs, except what would be taken up in the bone, for on slaughtering the hogs, all the intestines, hair and blood should be put in the compost heap, to be returned to the soil again.

Suppose ten hogs only were raised and fatted in the year, those ten hogs should be made to manufacture 100 loads of the richest kind of manure. A span of horses, one cow, and an ordinary family of six or eight persons, would furnish the materials for manufacturing fifty loads more. All the excrement, both solid and liquid, of the horses, cow and the family, together with the waste slop of the family, should all be saved by plenty of absorbents, and all put into the manure factory carried on by the hogs. In this way the hog, in his factory, would earn more than he has cost, and more even than he will fetch in market after being killed. The droppings of the cow, after having gone through the manure factory, would be worth as much as the *milk* of the cow, and the waste from the family would produce all the *provisions* of the family.

Let any farmer pursue the course proposed above, for ten or fifteen years, and, with a proper cultivation, he would have no occasion to complain that his land was poor, or that Providence did not smile upon his efforts.

I know that many of your readers will be altogether incredulous, and call me wild and extravagant in my proposition; yet if an examination were to be made of their farms, barns, yards, hog pens and hen roosts, it would be found that from one-half to nine-tenths of all their manure was wasted, and their farms, orchards and gardens were producing but half of a crop of any thing. So the world goes. I have not finished this subject, but shall trouble you once more upon it. J. L. Edgerton.

Waverly, N. Y., Nov. 13, 1860.

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People are seldom tired of the world until the world is heartily tired of them.

When is a woman a vehicle? When she is a "little sulky."

[For the Country Gentleman and Cultivator.]

CULTURE OF CORN AND POTATOES.

Messrs. Editors—I have received many valuable hints through the Gentleman, from the publication of the different methods pursued by individuals in raising various crops. The plan is an excellent one—and, although it may not always be practicable to adopt the exact mode given, yet, with a little variation, it may be useful and labor-saving. Now, as I have received, so will I (with your permission,) "communicate."

In raising corn and potatoes, I proceed in this way. After the ground is plowed and dragged *fine*, it is marked out with a light plow, three feet apart for either crop, and four inches deep for potatoes, and three inches deep for corn. The seed is then dropped in as desired—potatoes, either in hills or drills. I have raised them both ways—corn three feet apart in the rows. To cover the potatoes I take a one-horse cultivator, without the wheel, and take out the front tooth, put on two horses and let them straddle the row, and the work is done rapidly. To cover the corn I use a small harrow, the same size of the cultivator, with fine teeth, four inches long—the front tooth out—and proceed as with potatoes. By using two horses and removing the front tooth to the cultivator and drag, the seed is not disturbed, and the covering is done well and much more expeditiously than with the hoe.

When the potatoes are just breaking through the ground, the light drag, with the front tooth out, is run *over* the rows in the same way as for covering. It should be well opened, so that it shall meet between the rows and thus clean and stir the whole ground. The corn, as soon as the rows can be followed, is treated in the same way, and in about a week thereafter, the dragging is repeated. When the potatoes are about three inches high, the *cultivator* is passed over the rows in the same way as when the seed was covered, giving the ground a thorough stirring. In this way I think the ground can be more thoroughly stirred and cleaned close to the growing plants, than by going *between* the rows, and a team that understands their business will tread out less of the plants than a single horse—at least this is my experience.

The after culture is done by working between the rows. For potatoes I use a double mold-board plow in working them out the last time. In raising either crop the ground should be kept clean and mellow. I have rolled the ground after planting, but think the roller packs it too much, and prefer rolling before planting, if the ground is lumpy, giving it another harrowing before planting. Of course stony ground cannot be managed in this way, as the drag would be likely to work stones into the furrows.

Jefferson Co., N. Y. J. L. R.

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[For the Cultivator and Country Gentleman.]

To Bleach Broom-Corn Brush.

Dampen the brush with water, enclose it in a box, and apply the fumes of burning brimstone.

My manner of operating is this: I have a large box, made like a feed bin without partitions. It is three and a half feet wide, same height, and eight feet in length. Four inches from the bottom of the box is another bottom made of shingling lath laid in loose, the ends resting on strips nailed on the sides of the box. These pieces are an inch apart, to admit the free ascent of the smoke amidst the brush, which having been dampened, is stood up in the box on this false bottom. On the back side of the box, and between these bottoms, is a hole two inches in diameter, to receive the pipe conveying the smoke from the furnace—a flat iron pot with a sheet-iron cover, to the top of which the pipe is attached, and in which is also a small aperture with a sliding cover, to admit air forming a draught. The box will need to be elevated sufficiently to receive the pipe from the furnace, and the box must not be so tight as to exclude air, or the smoke will not circulate. The brimstone crushed into rather small pieces, is thrown into the pot, a piece of red-hot iron thrown into it, and the cover put on. With a pound of brimstone I have bleached brush enough for eight dozen of brooms. L. J. T.

Curing Hams.

On this subject, at a late meeting of the American Institute Farmer's Club, Mr. R. G. Pardee said "it depends partly upon how hogs are fed, but more upon the manner of curing than anything else, as to the quality of hams. They can be made almost as delicate as tender chicken. All hams should be cured by the following compound of articles: to 100 lbs. of hams use 8 or 9 lbs. of rock salt; 2 oz. saltpeter; 2 lbs. of white sugar; 1 qt. of best syrup; 4 oz. saleratus; 1 oz. allspice. These materials are boiled and scummed in ten or twelve gallons of water, and the hams packed in a barrel, and the brine put on cool, adding water if necessary to cover the hams. None but a new oak barrel should be used. Scald the barrel and cool it before putting in the hams. Let them lay three weeks and then take them out and air them twenty-four hours; put them back again three weeks, and then take them out and dry them thoroughly before smoking, which is done in an airy smoke-house, with cobs and maple or hickory chips. It is then a most delicious article of food. In smoking, be careful to keep your hams cool; never allow fire enough to heat the meat.

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Preserving Shingles.

Every farmer knows that the cost of the roofs of his buildings, as well as keeping them in repair, is a large item in his expenditures. Experiments should be made to lessen this cost. We observe the following in a late paper:—Dip the shingles in a tub of whitewash made of lime and salt. Line with red chalk. The carpenter may get a little lime on his hands and linen pantaloons, but this difficulty is not a very formidable one. The lime will harden the wood, and prevent its wearing away by rain and weather, and will effectually exclude moss, a common hastener of decay. It is said that shingle roofs will last twice as long when treated in this way, as without it. Whitewashing each successive layer of shingles after nailing down, is sometimes adopted, but is less effectual. Whitewashing the roof when completed, is comparatively useless, as the lime or but little of it, can enter between the shingles, where the water lodges and hastens decay.

Some one may object that this operation is "troublesome," but so is nearly everything that is done in a thorough and consequently economical manner.

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[For the Country Gentleman and Cultivator.]

MAKING AND PRESERVING SAUSAGES.

L. Tucker & Son—I frequently find in the Co. Gentleman, many good and useful recipes, and think I have a good one to offer to lovers of fresh sausage—would like some of your numerous readers to try it, (though it may be familiar to many.) I have the meat chopped or ground, and seasoned to my taste. I then have it all made out in suitable sized cakes, and fried until it is thoroughly cooked. During the process of frying, it is necessary to occasionally press each cake with a spoon, that all the watery particles may be removed—then place it closely in stone or earthen jars, one layer after another until the jar is filled. I then run warm lard over it sufficient to perfectly exclude the air—fasten a good thick paper over the top, and store them away to be used when wanted. When desired, the cakes may easily be removed, unbroken and perfect, by warming the jar—then put in a pan until thoroughly heated through, and they are ready for the table, as fresh and nice in mid-summer as when first made. I put up over one hundred pounds in this way last winter, and used the last the past summer, perfectly sweet and fresh. Isabella L. Jones. *Smithfield, O.*, 11 *mo.* 13

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☞ The Rochester Daily Advertiser has been at the pains to collect, as far as possible, the statistics of the Peach shipments from that city the past season, from the various railroads and express companies, and it gives as the aggregate amount, 98,469 baskets thus sent abroad. This, however, does not include any of those sent by steamboat to Canada or United States ports on the Lake, no account having been kept of the quantities thus sent off.

[For the Country Gentleman and Cultivator.]

CATTLE DISEASE.

Eds. Co. Gent.—There is a disease among cattle quite prevalent throughout the country, and as it commences its ravages at about this season of the year, or perhaps a little later, I wish to say a few words in relation thereto. My object is to describe the malady, and prescribe a remedy, the same being a preventive if adopted in season.

This disease is not considered contagious, though when a herd is attacked it generally goes through the whole. And yet, another herd may be in close proximity and entirely escape.

The disease is known by various names—the names indicating, in a measure, the progress it has made. The fore part of December, when it usually makes its appearance, it is called *thin-of-flesh*—as then the cattle begin to show symptoms of an attack. A month or six weeks later it assumes a different type, and is called *straw-fever*—this is immediately followed by *lousy-hide*. The disease is now progressing rapidly. A month or so later, say along in March, it is known by the name of *caving-in*. It takes this name from the fact that where the disease prevails there is a large cavity just forward of the hip joint, especially with cows that have just calved. And then, still later, or about the time of turning to grass, it takes the name of *spring-poor* or *crow-bait*—the latter name being given it for the reason that the animal is often used for that purpose.

It is pitiable to witness the sufferings of the poor animals, when under the influence of this disease. They seem to have a voracious appetite—more so than healthy animals—as is evident from the eagerness with which they enter a barn door or gate leading to a HAY stack if left open for a moment, to get a morsel of the "forbidden fruit." And then, with what an imploring look they watch their owner as he enters the yard—the spectacle is truly pitiable. But I will spare your readers—I would not excite sympathy in behalf of the *brute* creation—that would show a weakness.

But I propose to give a remedy for this disease, and, as I have before intimated, if taken in season it is a sure preventive. It is as follows: Provide them with warm, comfortable stables and plenty of straw to lie upon, as the medicine when taken is most grateful in its effects, and they will most likely wish to lie down during its operation. Now, at 6 o'clock in the morning, give a dose of cornstalks, if bright and good, and if cut they are all the better. Allow this to operate until 9 o'clock, then administer a dose of good hay. At noon—as an alterative—give half a bushel of *cut* straw, wet, with one quart of Indian meal, or its equivalent in other ground feed—a few roots mixed with this is excellent, as they keep the digestive organs healthy and the bowels loose. At three o'clock give cornstalks again, and at 6 o'clock another portion of hay. In case cornstalks are not at hand, hay can be substituted for the morning stalks, and cut straw with a little meal for the evening. The above should be given daily, and with regularity as to time, until they have a good supply of grass the following spring. And let me further add that each dose (cut straw excepted, which is apt to aggrevate the disease when given in too large quantities) should be as *large* as the animal will take. Fresh pure water should be allowed twice a day at least.

Let me here say that although this disease does not always prove *fatal* to the *animal*, yet it greatly *lessens* its *value*, and thereby proves *fatal* to the *interests* of the *owner*.

When the "Cattle Disease" (pleuro pneumonia) made its appearance in the eastern States a few months ago, doctors, legislators and governors were called upon to aid in staying its ravages, and large sums of money were appropriated to indemnify the owners from loss when slaughtering was deemed necessary. How large an appropriation would it require to meet the losses sustained annually throughout the country by the disease above referred to? Would it not take a "pile?" J. L. R. *Jefferson Co., N. Y.*

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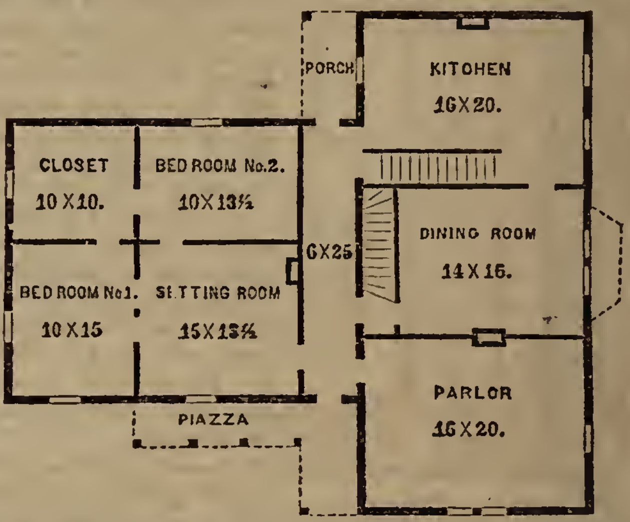
Never be idle. Always have something to do. Remember moments are the golden sands of time.

[For the Country Gentleman and Cultivator.]

PLAN FOR A HOUSE.

Messrs. Editors—I send you a plan of a building which I have in view, differing somewhat in its internal arrangements, from any I have seen. If you think it deserving, you may give it a place in the Country Gentleman. Should there be serious objections, I would like to have them stated if it appears in the Co. Gent.

The building I propose to be a *high posted* Gothic Cottage, or on that plan; giving ample sleeping rooms over the parlor, dining-room, kitchen, sitting-room, and bedroom No. 2. Bed-room No. 1 and the closet are a lean-to. The design of the two bed-rooms below, is that the youngest children may be near their parents. This is especially desirable and convenient where the children are all young, as it also would be in case of sickness.



Bed-room No. 1 is connected with the sitting-room by folding-doors, which can be opened at night and so give plenty of breathing room. Moreover, when the necessity for two bed-rooms below should cease, bed-room No. 1 and the sitting-room can be thrown into one, the former being turned into a library-room. The closet is of such size that a portion of it could be partitioned off for a bath-room. I propose a closet for china, opening from under the hall-stairs into the dining-room. A door can be put between the parlor and dining-room if desired. Also, a door can open from the kitchen into the wood-shed, which I would have adjoining it on the rear. The pantry, which I have given no place in the plan, I would have in the rear of the kitchen, at *a*. The hall can be divided into two, as I have indicated by a dotted line. The hall-stairs—the lower steps of which I would have of unequal widths, being widest near the dining-room door—make a turn passing into the upper story over the hall at *b*. The entrance to the cellar I have made from the kitchen—it can be from the back-hall if desirable.

This plan seems to me a good one. I do not know how it may appear to others, nor to me after seeing it criticised. C. J. C. *Michigan.*

This is a very good plan. The defects are slight, and consist chiefly in too small or rather too short a dining-room, to correspond with other accommodations. It might be amplified a little, by making a large bay at the end, as we have indicated by the dotted lines. This would add both to the internal appearance, and improve the exterior, the long face on that side appearing rather blank without a little interruption of this sort. There were too many windows in the sketch sent us; we have reduced them without at all altering the plan in other respects. Eds.

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Exports of Butter and Cheese.—From Sept. 1, 1858, to Sept. 1, 1859, there were exported from this country to Great Britain and Ireland, 307 tons of butter, and 2,599 tons of cheese—while from Sept. 1, 1859, to Sept. 1, 1860, the amount was increased to 2,141 tons of butter, and 7,542 tons of cheese.

[For the Cultivator and Country Gentleman.]

"BALLOON FRAMES"—9th Article.

The following questions proposed by "AMATEUR," we take much pleasure in answering:

1. In article No. 2, (Co. GENT., vol. 14, p. 387,) it is shown how to arrange the frame for a window. Is the portion of stud remaining above the window, supported by the strip on which rest the joists, or in part by the lintel of window?

2. Is the lintel notched into the studs at its ends, or is it only spiked?

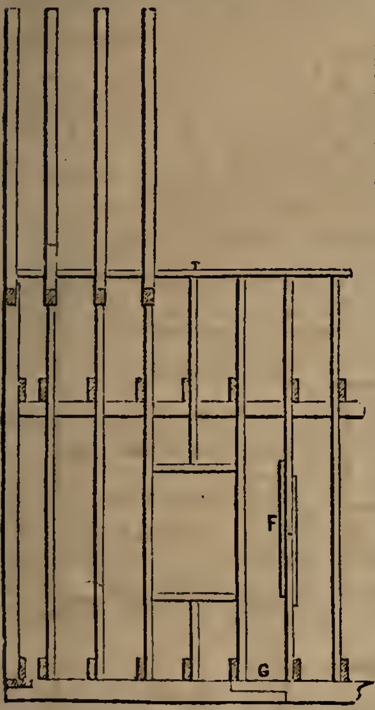

Fig. 1—Side elevation—G. manner of splicing sills—F. manner of splicing studs.

The portion of stud above the window, is held in place by the nail thro' the plate, by the side-girth, by the floor joist, and by being toed to the lintel or cross-piece above the window-opening. The cross-pieces above and below the opening for the window, are toed with spikes to the studs, each side of the window, not notched. The window frame is set in the opening, and would sustain all weight above it. When the flooring is nailed, if a row of nails be carried along the joist over the window, it would hold up some of the weight, but siding-lining, lathing, &c., would be all-sufficient to carry any weight over openings of this width.

3. In article No. 3, (Co. Gent., vol. 15, p. 226,) the collars are represented as "notched in" on the rafters. Is this notching necessary when the collars have no weight of lining or of plastering to support, as in those out-buildings which have such span of rafters as to require collars?

In story and a half buildings, it is very desirable that collars be put on securely, so as to prevent any thrust of the rafters; where the side-girth is not gained in, as in small unplastered buildings, the collars may be nailed or spiked to the rafter. If the side-girt is set into the studding, as it should be in a plastered building not lined inside, it makes a weak point in the studding, reducing them from 2 by 4 to 2 by 3, and the collars should be put on in such a manner as to guard against any thrust whatever. The size of the building, and the judgment of its constructor, will indicate the best course to pursue. Buildings of one, two, or more full stories, have no collars; the ceiling joists of upper story tie the upper part of the building, and take the thrust of the rafters.

4 In putting on lining, would it not be best for alternate courses of four or five boards each, instead of finishing together at their ends, to entirely cross at their intersections, and for one course to extend flush with the outer face of corner stud, and the next course crossing this, to extend flush with outer edge of the adjacent side?

Yes, that would be the best way. A strip should be nailed on the lining which laps the corner stud, to which nail the ends of that which butts against it. We furnish the drawings, isometrical, illustrating your idea, and thank you for it.

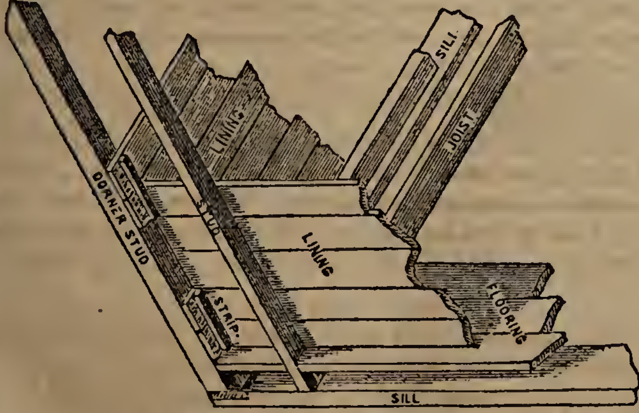

Fig. 2. Manner of lining Balloon Frames.

5. If the strip which, in such arrangement, it might be necessary to introduce, on which to nail the ends of those intermediate courses which do not extend flush with the outer edge of stud, is objectionable, how then are the ends of such boards supported as do not in any other mode of lining nail directly to the stud?

In the usual mode of inside lining, one side laps the stud. The ends of the lining of the adjoining side are nailed to a strip fastened to the stud to receive them. There is no objection whatever to this strip.

6. If ends of joists and sleepers (and lining?) are made flush with outer edge of studding, will the difference between the transverse shrinkage of the studs and the longitudinal shrinkage of joists and sleepers, be sufficient to effect any pushing off of the outside boarding?

We have built Balloon Frames with green oak studding, basswood siding, and butternut trimmings, that have never yielded. There is a system of compensation among the light sticks of a Balloon Frame, by which the seasoning process goes on without injury to it. We have seen warped surfaces produced by using green oak siding, and by careless building, but there is no good reason why a balloon frame building should not be always square and plumb, and the outside boarding remain secure.

7. Instead of fitting the rafters against each other at the top, is it not stronger, truer-fitting, and more easily done to use a "comb-strip," which saves labor, as by setting the rafters at the ends of the strip, the intermediate ones by using the strip as a support and its top as a guide, can be more easily and truly placed, and which is stronger, since it gives more nail-hold and prevents swaying whilst the sheathing is not yet put on?

It is better at all times to use a comb-strip or ridge-board, or pole, in setting the rafters; to use it or not is a matter the builder can easily decide. The roof of a balloon frame does not differ from that of the old fogy frame, and the various modes of constructing that, are equally applicable to the balloon.

8. For a large building, say one having rafters 24 feet long, is it best or not, to "taper" the rafters—thus instead of using a rafter five inches wide at bottom and five inches at top, let it be six inches at bottom and four inches at top? This will give no waste of timber nor extra labor—as to have them five inches wide, it is necessary to saw down the middle of a board ten inches wide, and to have them tapered from six inches to four inches, it is only needed to divide the same board diagonally.

9. If best to "taper" the rafter, what is the proper dimension of a rafter 24 feet long, for a pitch of about two-thirds the span, and 16 inches between centres?

The subject of tapering rafters has been pretty thoroughly discussed heretofore. The same amount of strength can be had with a less amount of lumber. There is an additional labor in sawing such rafters, as well as a different calculation to be made in using up a log to the best advantage. It is necessary always to order this special bill of rafters direct from the mill, and the result will be that the extra cost will, nine times out of ten, overbalance the amount saved.

10. Lastly, will Mr. WOODWARD, in his usual practical style, give drawings and measurements for a Balloon Frame, as applicable to vertical boarding and for large buildings?

Yes, sir, Mr. WOODWARD will cheerfully prepare drawings, illustrating the manner of arranging the details of the balloon frame. We propose to complete thoroughly this subject as fast as our time will permit.

GEO. E. WOODWARD,
Architect and Civil Engineer, 29 Broadway, N. Y.

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[For the Country Gentleman and Cultivator.]

Fattening Hogs on Dry Corn.

MESSRS. TUCKER & SON—One of my neighbors—a farmer all his life, and over 70 years of age—fattens his hogs in a dry pen *without water or slop*—giving them *nothing but corn*, and I have noted the fact for five years that I have lived here, that he has made I think the best—I know the fattest pork in this county. The hogs while fatting, particularly in dry warm weather, eat and lie down, walking about but little. Had I known the above 20 years ago, it would have saved me a great deal. W. HALL.

Trimble Co., Ky., Oct. 25, 1860.

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THE COUNTRY GENTLEMAN.—The following is an extract of a letter from Scott Co., Missouri:—"Although I have been a subscriber to your excellent and valuable COUNTRY GENTLEMAN but one year, I have received more benefit than would pay for it for ten years to come, and I hope to be able to add a little information to your columns shortly, in regard to raising corn, as the prospect now is very flattering, at least to me."

[For the Country Gentleman and Cultivator.]

FARMING ON LONG-ISLAND.

Potatoes, Onions and Asparagus.

Messrs. Editors—I have often been gratified and instructed, in reading the letters of our venerable friend John Johnston, published in the Country Gentleman. No person values his opinion higher than I do, but I think that he may be sometimes mistaken.

In the Country Gentleman of Nov. 15, is an account of his visit to Long-Island. In describing what he saw there, he says:—"Some of the farmers buy stable manure from the city stables, but along the coast, where it is brought in sloops, it costs them from sixty-three to seventy cents for fourteen bushels of fire-fanged, light horse stable manure, measured in New-York. I never heard of horse dung and straw sold by the bushel before. Any man may see that no common farming can pay that price for manure. It may do for gardeners to pay that price, but for common farming never."

I have heard of the remark of one of our old Long-Island farmers, who had been in the habit for many years of buying large quantities of New-York stable manure, and had got rich in the mean time—"that he never could see how the farmers could make it profitable to buy manure at the price they were paying, but one thing he had always noticed, that those farmers that bought the most manure always had the most money."

To show that we can make it profitable to buy stable manure by the bushel, I will state the result of three crops, that were raised this season by my two nearest neighbors and myself, which crops took the first premiums at the winter meeting of the Queens County Ag. Society, held yesterday.

The first was a crop of Asparagus, raised upon six acres of land by Peter Cock.* A portion of it being young was not cut for a very long time. It was sold, deliverable at the dock in New-York, for 21 cents per bunch for the season, which lasted about seven weeks.

The amount of the sale was,	$1,922.00
Expenses for manure and labor,	574.00
Nett profit,	$1,348.00

The second was a crop of red Onions raised by Daniel K. Youngs, President elect of our County Society, of about four acres, one acre of which was surveyed and measured. The quanty of onions raised on this acre was 350½ barrels. They were contracted to be delivered at the dock in New-York, at one dollar and fifty cents per barrel.

Value of crop on an acre,	$525.37
Expenses, including manure, labor and freight,	185.42
Nett gain,	$339.95

These crops that I have mentioned, may justly be considered by Mr. Johnston as not "common farming," but gardening. My own crop is not of that class, and should be considered as "common farming." Potatoes preceded by corn, and to be succeeded by wheat and grass.

I planted about five acres of land with Mercer potatoes, commencing the last week in March and ending on the 5th day of April. Commenced harvesting the crop August 6th.

The field, the previous year, was planted with corn—coarse barn-yard manure spread upon the sod, and 300 lbs. Peruvian guano to the acre, in the hill. The land a sandy loam. It was furrowed for potatoes two feet and four inches wide, (half the width of a wagon.) The greater portion of the seed was cut from large potatoes, rejecting the small end covered with eyes—a portion of it from potatoes of medium size, cut in the same manner; the balance with whole potatoes of medium size.

Three plots were set off, and the potatoes carefully measured.

Plot No. 1, containing one acre, was manured with new New-York stable manure, 100 carmen loads, (called 14, measured 10 bush.,) and Peruvian guano 350 lbs. The manure was spread in the bottom of the furrow—the guano strewed upon the manure—the potatoes dropped upon the guano, and covered with a plow. Yield, 250 bushels.

Plot No. 2, containing one acre, was manured with old New-York stable manure, 150 carmen loads, and guano 350 lbs. Yield, 308 bushels.

Plot No. 3 was surveyed and measured by chain and compass. It contained 117¾ rods. The ground low and damp adjoining a piece of wet land drained by open ditches. manured in the same manner as No. 1. Yield, 264 bush., or at the rate per acre of 358½ bushels.

Four rows adjoining No. 3, manured the same, with the exception of the guano, yielded but five-sevenths as large a quantity as the rows in which guano was put.

The crop from the rows in which there was guano, exceeded in value that in which there was none:

At the rate per acre of,	$54.00
Cost per acre for guano,	10.00
Nett gain by the addition of guano,	$44.00

With the exception of a few rows on the lower side of the damp ground, in which the potatoes were nearly all rotten, there was not a bushel of rotten ones on the whole piece.

There was no difference whatever in the quantity or size of the potatoes raised from the seed cut from large and medium sized potatoes; from medium sized potatoes, whole, the quantity of large potatoes was but about three-fourths as great as from the cut seed, and twice the quantity of small ones. This was caused by the end of the potato containing the cluster of eyes being retained on the whole potatoes, which end produces most of the small potatoes.

Nearly the whole of the marketable potatoes were sent directly from the field to New-York, and were sold for $2 per barrel.

Nett value of crop on Plot No. 3,		$135.47
EXPENSES.		
74 carmen loads stable manure at 57 cents,	$42.13	
250 lbs. Peruvian guano at $58 per ton	7.25	
Labor, estimating men and horses each at 75c. per day,	16.60	
Seed	4.20	
Total expense,		70.23
Balance		$65.24
One half of the cost of the manure chargeable to the succeeding wheat crop,		24.71
Nett Profit.		$89.95
Nett profit at the rate per acre of,		122.23

Some persons that are not aware of the necessity of high manuring to obtain a good crop upon Long Island land, may think that the charge of about thirty-three dollars an acre to the succeeding wheat crop is an exhorbitant charge. I will state for the information of such that upon the field adjoining, from which I had taken a crop of oats, and which was sowed with wheat in September last, I spread on over $40 worth of stable manure to the acre to make it equal to the potato ground.

This would not be considered an unusual crop in some sections of this State, even with slight manuring, but it is quite double the usual crop raised upon Long Island lands, which, as Mr. Johnston says, have been settled over 200 years. This farm has remained in the family, and has been under cultivation since 1667.

I find by experiment that as many potatoes can be obtained from each row furrowed out 2 feet and 4 inches wide as from the usual width of 3 feet, which adds two-sevenths to the crop per acre.

"Observer" will find all of his questions answered by referring to plot No. 2, on which there was but one rotten potato found, and that one was bruised during cultivation. I fully agree with his "Scotch friend," that it is hardly possible to over manure land suitable for the potato crop.

I believe that no kind or quantity of manure will cause the potato rot, and am *certain* that no kind will prevent it.

Soon after the disease first made its appearance in this State, I commenced experimenting to find a preventive, leaving it for others better qualified to seek the cause. I tried the different kinds of animal manure, guano, lime, leached ashes, potash, salt and plaster, each upon separate rows, and in the same season, none of which prevented it.

My next experiment was planting at three different times in one season; the first planting about the 1st of April, with about three weeks intervening between each of the times of planting. The result was that those raised from the first planting were all sound; from the second a small portion diseased, and from the last a large portion of them were rotten—since which time I have generally planted as early as possible, and when planting the Mercer, or other early ripening sorts, with strong manure, and have dug them as soon as ripe, I have had do difficulty with the rot.

If I failed to plant early, or manured with a poor quality of manure, that did not force the potato to a rapid growth, the disease would again make its appearance.

Peachblows, being a late ripening variety, will rot here, even if planted very early.

The true preventive, according to my experience, is to plant early with early ripening sorts and manure highly.

Matinecock, Oyster Bay, L. I., Nov. 27. GEO. R. UNDERHILL.

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[For the Country Gentleman and Cultivator.]

Experiments in Corn and Potato Culture.

EDS. CO. GENT.—I embrace the present opportunity to redeem my pledge, to furnish you some account of my farming operations on a small scale.

I planted about two acres of corn and potatoes. One acre of this had been under cultivation five years previous, mostly to corn. Heretofore my habit has been to manure in the hill, but last spring, by way of experiment, I spread the manure which had accumulated during the winter from a horse and cow, evenly over the surface—after plowing in the spring—of about one-half of my acre lot. This was afterward harrowed, then marked with a light plow and planted, one-half—or one-quarter of an acre—with corn, the other quarter with potatoes. The remaining half acre I furrowed and a part of it manured in the hill, with a similar manure to that which was spread on the surface of the first half of my lot. The remainder I planted without any manure; but when hoeing the first time I applied hen-dung mixed with ashes, and well pulverized by repeated rubbing on a barn floor with a hoe, after the manner of mixing mortar. Of this mixture, of about two parts of ashes to one of dung, I used to each hill a small handful, or what I could take from the measure with my thumb and three fingers.

Now, as to the results. I could see no difference in the yield of corn from the three different quarter acre pieces. That manured in the hill made the greatest growth of stalks of either of the three, and that on which I used hen-dung and ashes the smallest of the three; but the product of corn was so near alike that I was not able to say which was the best. From the whole, I harvested about 76 bushel baskets of corn, besides what was picked for family use when green.

My potato ground, as I have said, was surface manured, dragged and furrowed. After dropping my seed—the western reds—I covered lightly with a plow. The yield was at the rate of about 300 bushels to the acre, and would have been more if disease and rot had not affected them. In fine I never had as good a growth, early in the season, as this year, but much wet and early rust put an abrupt termination to their growth, and made my crop short of what it would otherwise have been. Perhaps I should state my mode of culture after planting. I run a cultivator both ways between the rows when the tops were about six inches high, and later in the season plowed deep between the rows one way, turning the furrows towards the hills. In addition I used the hoe sufficient to work the dirt among the hills and subdue the weeds.

I also used the plow, the second time hoeing, among that part of my corn which was surface manured, and the former part of July set on part of this ground Swedish turnips between the hills of corn. As the result I have 10 bushels of these roots, which I propose for feed for my cow. On the whole then, I am satisfied with my experiment of surface manuring for corn and potatoes, and although I have had no reason to complain of the results of hill manuring either this year or years before, yet I think the surface manuring has this advantage: Where at the last hoeing the plow is used and the furrows turned towards the corn, it leaves a good ridge manured to a greater or less extent for a turnip crop. S. W. RAYMOND. *Clinton, N. Y.*

P. S.—I forgot to say the other part of the two acres was greensward, plowed and planted after the 20th of May, as the spring drouth did not allow of earlier plowing. This was planted without manure. The growth of stalks was large and the yield of corn good; though there was a larger proportion of soft corn than I usually get, owing to the shortness of the season.

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[For the Country Gentleman and Cultivator.]

SUN-DRIED BRICK FOR BUILDINGS.

In reply to the inquiry of D. H. J. in the Co. GENT., page 256, I would say that he will find practical information relating to building with sun-dried brick in the U. S. Patent Office Ag. Report for 1843 and 1844, (Doc. No. 177,) pages 6 and 239, also in the 1846 edition of Loudon's Cottage, Farm and Villa Architecture, pages 77, 416 and 417. I constructed a small building in this way by taking loam from new land, which had been thrown out in excavating for the cellar of a house. This was wet and mixed with hay which had been cut with a hay cutter, worked up with a hoe as masons usually work up mortar, and placed in wooden moulds like the four sides of a box —stiff enough to keep its form when the mud was pressed into it, and smooth inside, and a little beveled so as to lift easy. The bricks should be made where the moisture will evaporate; and in a few hours, on a good drying day, they will become hard enough to be turned up, so that the bottom can dry, and in a few hours more will be so dry and hard that they can be handled and placed under cover. If care is taken to have them bound well, I do not think it necessary to use mortar in laying them up for a small building, if plastered with cement outside and in.

I made a cement recommended by Mr. Ellsworth in the Patent Office Report, but not having enough I finished with common hydraulic cement and washed it as recommended. The cement adheres better if the surface of the walls are wet as you apply it.

My building was only about 12 feet square and the side walls about 6 feet high. It was built about ten years since, and the external walls appear as well as when first made; inside, the cement is broken off in two or three places, and the earthern walls been eaten into for an inch or two by calves, who were probably attracted by the smell of the hay with which they were tempered. The roof is thatched with straw, and it is dry and warm in winter and cool in summer. H. B. O.

Whitinsville, Worcester Co., Mass., Nov. 9, 1860.

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[For the Country Gentleman and Cultivator].

BEE CLAMPS.

In reply to the inquiries of V. A. and J. W.—"What is a bee-clamp, and how to make one?" I would refer them to "Langstroth on the Honey-Bee." Commencing on page 348, last edition, they will find ten pages on this subject, giving plans for constructing and the results of several experiments. My friend, Mr. B., obtained his information from this book. He has modified, simplified, cheapened, and improved the construction, and I hope he will soon publish a full account of his experience, and how he made his clamp.

To be brief, a bee-clamp is an enclosure formed principally of earth, entirely above ground, and provided with ventilation. The boards, straw, earth, and ice or snow covering, being of such a thickness as to prevent the temperature within from going below the freezing point, or from rising much above it. Like an Esquimaux hut, not affected by external changes, and so shaped and provided with drainage and ventilation as to be free from moisture. I intend, if possible, to be present when my friend builds his clamp, and then I shall know more about the matter in detail, and will communicate.

The dry air and equable temperature of the chamber of a Schooley's Preservatory would, I think, answer well for winter quarters for bees. I hope some one owning one of these structures will try the experiment, not forgetting the necessity for perfect darkness, and to therefore keep the window-shutters closed. E. P.

HOW TO TAKE UP FRUIT TREES.

Every one must be aware, at least with a moment's reflection, that if a tree could be removed with all its roots, including all the numerous thread-like radicles, and placed in the soil precisely as it stood before, it would suffer no check in growth. The nearer we approach this condition, therefore, the greater will be our success.

We have lately had occasion to observe trees from a number of different nurseries, and to witness the manner in which the operators in each have endeavored to carry out this requisite of success. On the whole, the result was not very gratifying. The side roots were often badly cut with the spade, and the trees resembled that shown in fig. 1. Many who buy trees will observe in this a pretty accurate delineation of most of the trees they receive. There are many others that are still worse, like fig. 2. A very few are taken up with great care, and resemble the one exhibited by fig. 3.

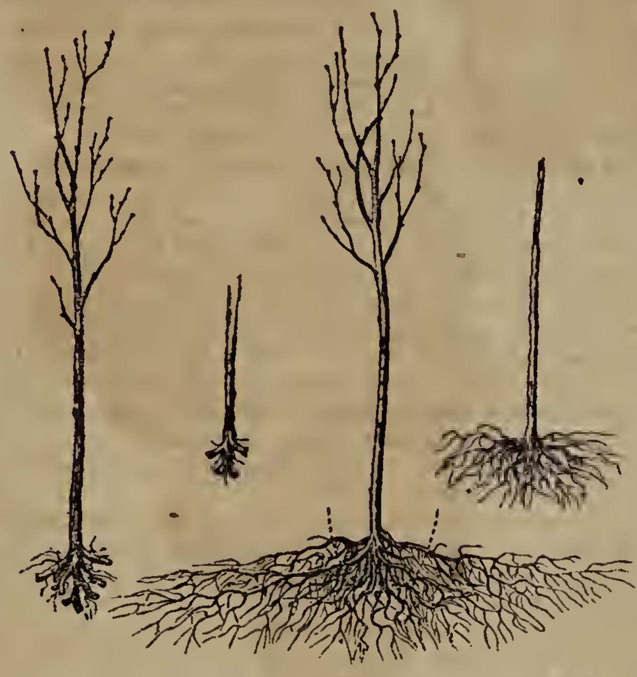

Fig. 1. Fig. 2. Fig. 4. Fig. 3.

Many people "wonder" why trees are so much checked by transplanting—they are sure that *nearly all* the roots have been removed with them, even when cut like fig. 1. If they should very carefully examine the roots, they would arrive at a different conclusion. By washing the soil away from the trees, the roots are found to have run long distances. The old theory that the roots extend over an equal area with the branches is far from correct; and the later one that the diameter of the circle of roots is only equal to the height of the tree, is still short of the truth. Careful examination shows that they generally extend as far *each side* as the full height of the tree. For example, the extreme fibres of a tree four feet high, (provided it has had plenty of room to develope itself, and is of stocky growth,) will be found about eight feet apart; quite as far as represented by fig. 4. The minuteness or threadlike-form of these fibres prevents their being usually perceived. Cutting out with the spade, that very small portion included within the dotted line of fig. 4, which is about the usual amount retained by the tree, as the operation is commonly performed, leaves but little for the support of the tree, and it is no wonder that it barely survives, or makes but little growth.

To secure a good supply of fibers, small or moderate sized trees must first be chosen, for it is impracticable to take up any considerable portion on large trees. Hence small ones generally outgrow large ones in a few years, and make much finer and more thrifty bearers. Secondly, good tools must be procured for the operation; with a small, short, feeble spade, it is nearly impossible. There is a spade made especially for this purpose, by D. R. Barton of Rochester, the blade of which is about 16 inches long, and two such instruments thrust far apart under a tree, will lift out a large circle of roots. It is made of the best steel, admirably tempered, and highly finished, with a stout handle, and will support the weight of a heavy Irishman. (Cost, $5.) Thirdly, every workman taking up a tree, should first hear a lecture, accompanied with practical illustrations, *and adapted to his capacity*, on the importance of saving plenty of roots. Sometimes it is necessary to repeat this lecture, in short sentences.

"Some cultivators," says the Am. Fruit Culturist, "have adopted the opinion that the small fibers are unimportant, and may be cut off without lessening the chances of growing. But this can only be true with very small trees or seedlings, which quickly reproduce a multitude of small roots, after the top is removed for the insertion of a graft; or where the fibers of larger trees have been killed by exposure after removal, and which are followed by a necessary lopping of the branches."

As it is impossible to secure all the roots, there must be a corresponding shortening back of the top shoots, as described and shown in the article on this subject on p. 14, of vol. XVI of the Country Gentleman.

DWARF APPLES.

Five years hence, the dwarf apple will be more popular than at present. This mode of culture possesses one great advantage over the dwarf pear, namely,—all the different varieties of apples succeed well propagated as dwarfs, while with the pear, but few continue to grow and flourish. We placed at the same time in adjacent rows, over a hundred varieties of each, selecting so far as was practicable those pears that grow best on the quince, but of course taking many in so large a number that were quite unsuitable,—a prominent object being experiment. They have both now grown four summers since transplanting, with the following result:—

As was expected, the pears have become much thinned in the row, a part by unsuitableness, and a part by blight, while many are stunted and feeble. A considerable portion, embracing such sorts as the Buffum, Hardy, Superfine, Winkfield, Angouleme, &c., are in a vigorous state of growth and bear abundantly. This uneven result might have been guarded against by the selection of such sorts only as are here named,—liable, however, at all times to the blight.

On the other hand nearly every apple tree forms a fine, thrifty, bearing tree, and the rows present a beautiful and uniform appearance. A part are on Paradise, and a part on Doucin stock. The former are about five feet high, and most of them, this fourth year, have borne from a peck to a half bushel of fine fruit, and some a bushel. The trees worked on the Doucin, are six to seven feet high, and only a part have borne much,—being larger and more rapid in growth and less fruitful while young, but doubtless more productive afterwards because larger. The soil is a very fertile and strong loam, and has been well cultivated. On a poor or thin soil we should not look for equal success. We recommend, unhesitatingly, to all those who wish to grow apples in gardens, to plant and cultivate dwarfs. Where trees eight or ten feet high are desired, select the Doucin as a stock; where the ground is more limited, and smaller trees are preferred, choose the Paradise.

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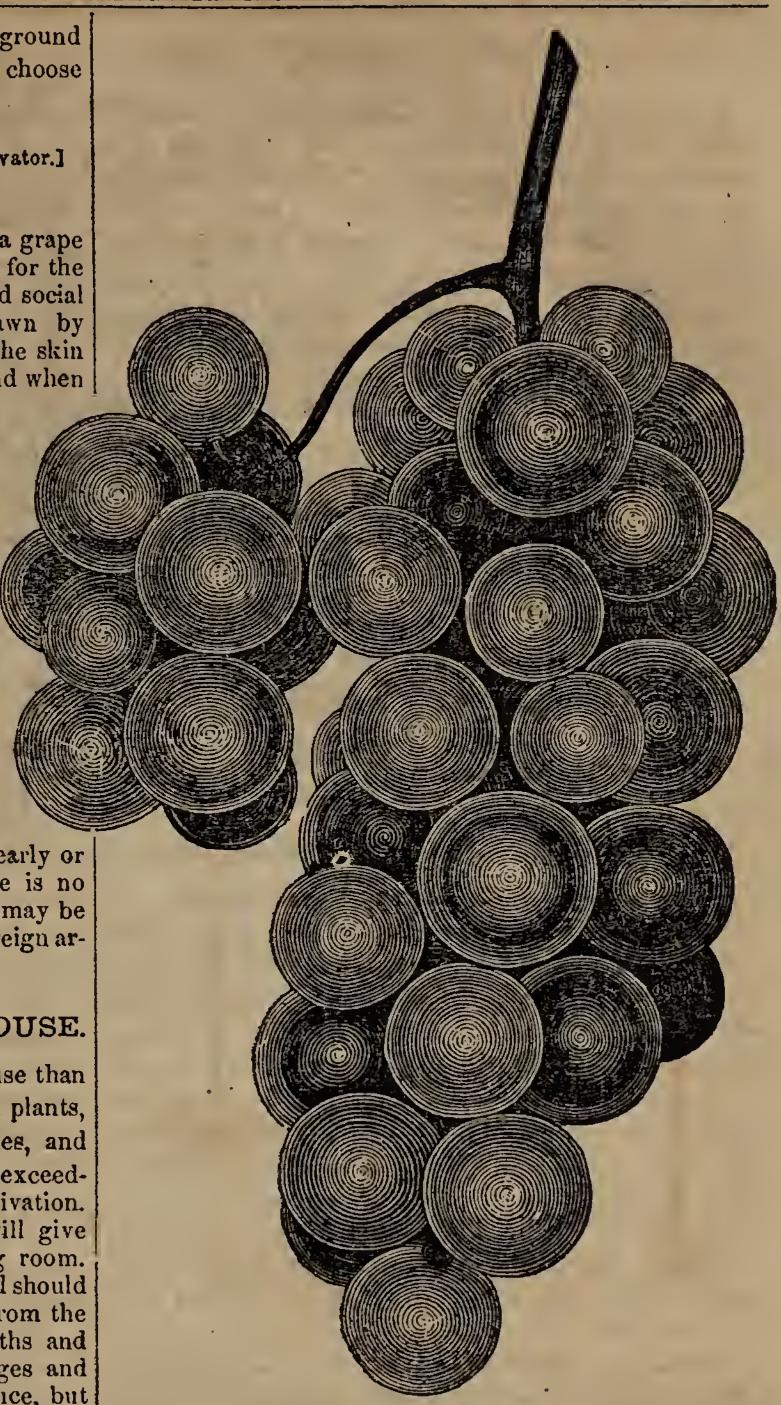
[For the Country Gentleman and Cultivator.]

THE OPORTO GRAPE.

A few years since my attention was directed to a grape cultivated by farmers and amateurs in this vicinity for the manufacture of wine for medicinal, sacramental and social purposes. The cut is a good representation drawn by actual measurement from a cluster this season. The skin is black, covered with bloom. The juice is thick, and when fully ripe dark red, staining the hands a purple color, and imparting to wine made from it without water, the dark color usual to port wine.

There is an opinion that the original vine was given to Miss or Mrs. Dunlap, by a ship captain, and that he brought it direct from the city of Oporto, which would make it a forigen grape; but the growth of the wood, the shape and texture of the leaves, its perfect hardiness, with the vines never laid down, in latitude 43° N., leads me to the conclusion that it is an American seedling, though it may be a child of foreign parents. Having asked the opinion of N. Longworth, Esq., on the subject, he writes—"If the Oporto is perfectly hardy, I cannot think it a foreign grape." The wine made from it has the flavor and bouquet of Port, and is pronounced by good judges nearly or quite equal to the best imported Port, and there is no doubt in my own mind, that from this grape may be manufactured a wine which would supercede the foreign article. E. Ware Sylvester.



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FRAGRANT PLANTS FOR THE HOUSE.

No plants are more easily cultivated in the house than Heliotropes, Mignonette, and other sweet scented plants, and none are more desirable. Oranges, Jasmines, and Pittosporums, are not only beautiful in foliage, but exceedingly fragrant. All these plants are very easy of cultivation. A dozen pots of Heliotropes and Mignonette will give bloom enough to spare for bouquets in the sitting room. Heliotropes when taken from the ground or repotted should be well cut back. Mignonette should be raised from the seed. . In addition to these, a few pots of Hyacinths and Jonquilles should be grown for fragrance. Oranges and Pittosporums are generally too large for convenience, but where room is abundant they should by all means be grown. They will require to be planted in cedar tubs, with handles, for convenience in moving from place to place. When in bloom they may be placed in the hall or parlor, and if the tubs are neatly painted, and the leaves of the plants washed with a sponge, are really very handsome ornaments of a room. In summer they may be placed anywhere on the lawn, or sunk in holes made in the ground. G. B. H.

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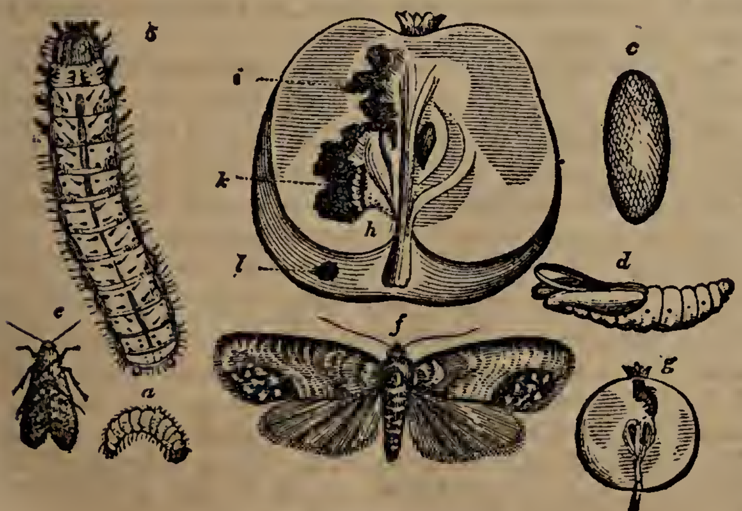


THE APPLE WORM.

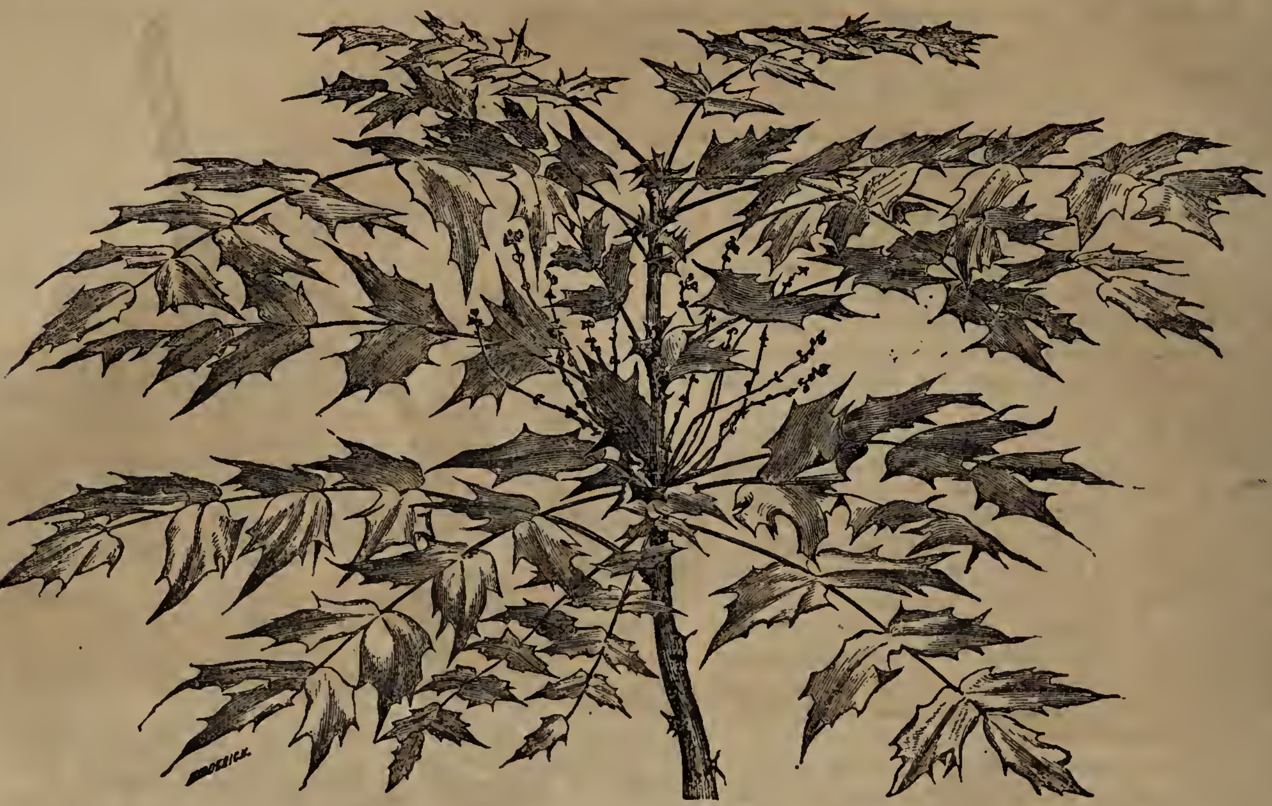
THE APPLE-WORM.

Messrs. L. Tucker & Son—I wish to inquire of you through the Co. Gent., of a new enemy to the apple in this part of country—a small worm from one-half to three-fourths of an inch long, with a black or red head, to be found in the heart of nearly all the apples this fall. The eggs seem to have been deposited in the blossom, and when the apple grew, they must have hatched out in the centre, and eat the core and often the seeds entire. When matured they eat out, causing the apples to rot at first at the core, the outside appearing sound and firm, no sign of an enemy being present; but when cut open we find the heart decayed, with the small worm above described. I have lost between $500 and $1,000 this season by this small worm.

Can you give us a remedy? As they eat out and fall on the ground for the next season, will fall plowing destroy the insect in the winter by exposing them to freezing of winter, or cultivation in summer? As for cultivation, I don't think that of any use, for a portion of my orchard this season was in potatoes, and I could perceive no difference. The balance of the orchard was in rye, and was plowed under in part to seed it again, but when I found the fruit affected so badly I discontinued the operation.

Bullett Co., Ky. F. Pound.

This insect is evidently the well known *Apple-worm*, so



A NEW SPECIES OF MAHONIA OR ASHBERRY---Mahonia intermedia.

The *Mahonia aquifolia*, or Holly-leaved Berberry, is a well known valuable evergreen shrub, not by any means so extensively planted as it deserves to be. Its dense habit of growth, peculiar glossy, purplish green foliage, which it retains all winter, and its large showy clusters of bright golden flowers in the early spring, unite in making it a most attractive feature on the lawn. The foliage does get injured somewhat in the winter, it is true, and especially in exposed places, but this injury is very slight if it enjoys the protection of trees or other objects from the sun in winter. To be effective, it must, like the Rhododendrons and Kalmias, be planted in groups or masses of considerable breadth. This new species, *intermedia*, a branch of which is represented by the above wood cut, is represented in the foreign journals to be vigorous and hardy, enduring the most intense cold without injury, to have yellow flowers and violet fruit like the *aquifolia*, and to be remarkably beautiful in habit and foliage. All the Mahonias may be propagated either by seeds, layers, suckers, or cuttings of the young ripe wood.

troublesome in a large portion of the Union, and which it appears has recently found its way to Bullett Co., Kentucky, the residence of our correspondent. It is known in Europe as the *Codling moth.* The accompanying figures exhibit the insect in its different stages. The larva of the natural size is shown at *a;* the same greatly magnified at *b*—the cocoon *c*—crysalis *d*—the perfect or winged insect *e*, the same somewhat magnified and with the wings spread *f*—the worm in the young apple *g*, and the same more advanced at *i*, *k*, *l*.

The perfect insect or miller lays its eggs in the young fruit early in summer, and the young grub soon hatches; at first it is nearly white, with a black head, and with four rows of small black dots along its back. The head afterwards turns brown, and the body to a flesh color. The young fruit usually falls in a few weeks; but whether it falls or not, the insect leaves it, spins a cocoon, and becomes a pupa. It often selects the seams or crevices of the rough bark for this purpose. If early in the season it soon comes out, and this second crop of moths or winged insects again deposit eggs in the blossom end of the older apples, too late indeed to prevent their full growth, but spoiling them in a great measure for use and market. Straggling individuals appear during the whole of the season.

The best remedies are the following:—Turning in swine in large numbers, to destroy the fruit as soon as it falls, and with it the grub. Scraping, and washing the bark with soap suds, and destroying the cocoons. As the perfect insects are active in evening, it is not improbable that many might be destroyed by placing lamps in vessels containing sweetened water in the tree, into which they are attracted, plunged and caught.

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WESTERN APPLES.

The following notice has been kindly furnished by our correspondent A. G. Hanford of Waukesha, Wis., one of the most intelligent pomologists of the West:—

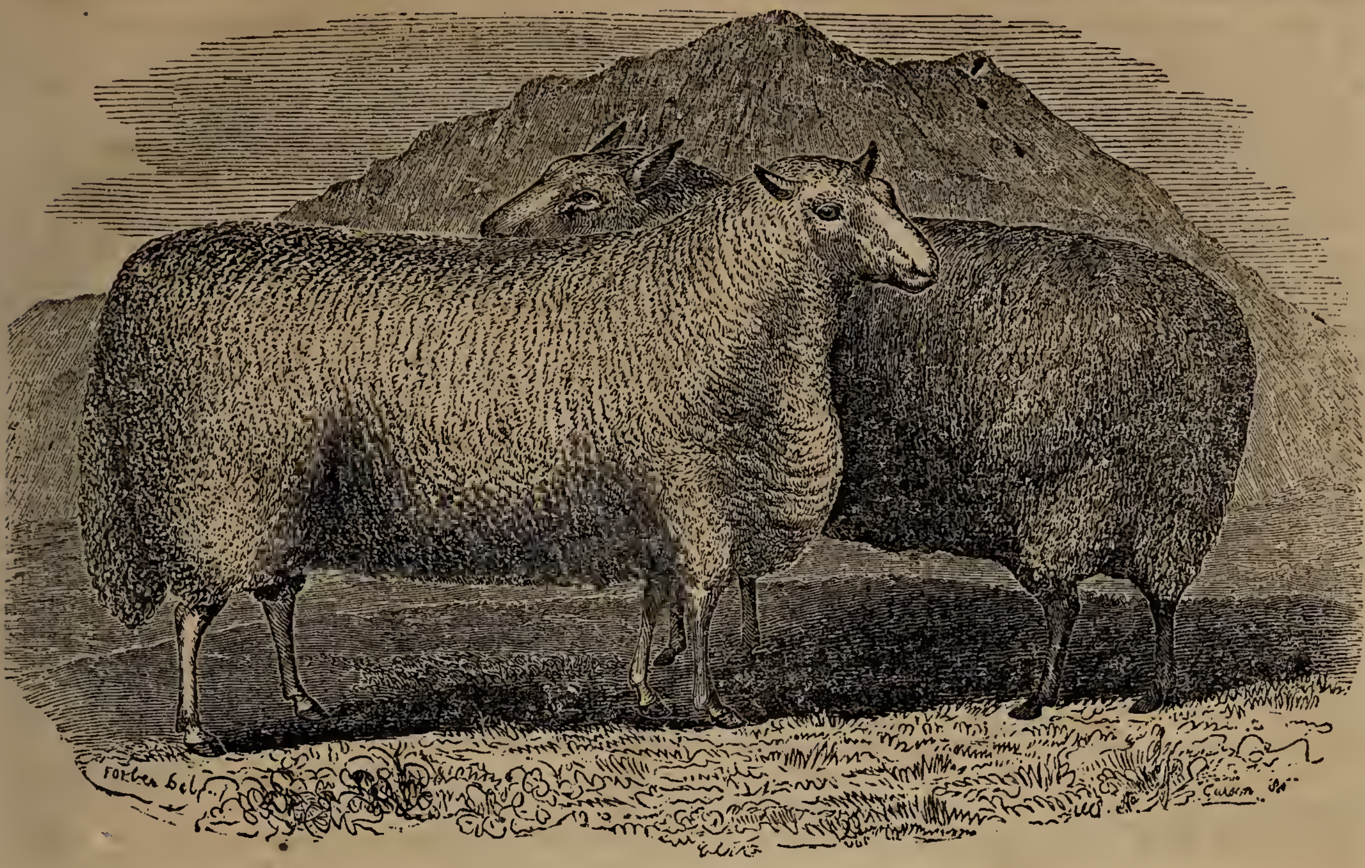
Among the varieties of apples here which seem particularly suited to our climate, are many of either uncertain or Western origin. Among them are a number which are strangers to Eastern cultivators. I propose to send you brief descriptions of some of these, commencing with the

Perry Russet.

Evidently an old Eastern sort, as it is not unfrequently met with in our oldest orchards under various names. Usually as "Golden Russet"—quite distinct from English Golden, or Golden Russet of New-York.

Mr. Phœnix of Bloomington, Ill., found it, if I remember correctly, growing in Perry, Wyoming Co., N. Y., without name. Mr. P. cultivated it in his nursery at Delevan, Wis., and diseminated it quite largely as Perry Russet, by which name it is now generally known.

Tree a good grower; shoots rather slender; upright while young—becomes spreading with age, making a large orchard tree. Very hardy and productive, though not an early bearer; blooms late, and often escapes spring frost, when other varieties are cut off. Succeeds well in Wisconsin and Illinois. Does well grafted upon the root. Fruit medium to large—roundish ovate. Skin yellow, covered with thin russet; flesh yellowish, fine grained, tender, juicy, mild subacid, in use all winter, and keeps until April or May.



Cheviot Sheep.

CHEVIOT SHEEP.

Above we give the portraits of a couple of rams which received prizes at the Highland and Agricultural Society's Exhibition of Scotland; and we copy the following article in relation to this breed of sheep from *The Homestead*, and shall be pleased to hear from those who have kept them in this state:

We have never known of an importation of full-blood Cheviots into this State till within a few days past. Mr. Nathan Gillet of Hebron, Tolland County, has just made the purchase of some very fine animals in Delaware county, N. Y. He gave us an opportunity to examine the buck as he came through the city. He is as noble a sheep as one is likely to meet with of any mutton breed, and has been winner of two first prizes at the Delaware County Fair. He is three years old and weighs two hundred and twenty pounds; his fleece close and remarkably uniform in length; in form he approximated to the long wools so closely that but for the fleece, at first sight we should have taken him for one.

This breed has greatly improved of late years and throughout some large sheep raising districts of New-York they have been extensively crossed upon the "native" breeds with excellent success. They are hardy, bearing exposure to wet better than the long-wool breeds, on account of the closeness of the wool upon the back and the hardiness of their constitutions.

This breed is native to the Cheviot Hills in Northumberland, and south of Scotland, and while for many years the breed has been within the limits of the district, quite pure, upon the border they have mixed with the Black-faced Highland sheep on the one hand, and besides have been more or less crossed with the Leicesters or long wools on the other. They are hornless, the heads bare; faces white, though grayish or dun spots do not indicate essential impurity; the carcass is well formed, long, and the objection which the books urge, that the chest is neither deep nor broad enough, seems to have been to a great degree done away by careful breeding; certainly the buck above mentioned had as good a chest as we desire to see. Their underpinning is firm and clean, wooled down to the hock.

[For the Cultivator and Country Gentleman.]

CARE OF THE HORSE---II.

Grooming.

It is better to clean the horse before than after breakfast. Groom in the open air if possible, as it is better for you and the horse not to inhale the dirt arising from his coat, which you do more or less if not carried away by the wind. With the brush clean the head, rubbing against, across, and with the hair. With a cloth clean the ears, and polish the hair. Sponge out the eyes and nostrils, and mouth, with a wet sponge. With the curry-comb cury the neck, body and quarters. Do not rub against, as it breaks the hair, but a circular motion. After getting the dirt out with the curry-comb from those parts, clean the inside of the elbows and flanks, and legs, with the brush, the curry-comb being too hard, and also polish tho hair of the body. If the weather is warm, wash the legs and feet, but if not, only the feet. Comb out the mane and tail. While you have been doing this, your blankets ought to be airing. Clean out your stables. Do not throw your bedding under the manger, as the fumes of the hartshorn arising, makes the eyes watery, and also are inhaled; if he gets it under his feet, as he will be sure to do, it makes the feet feverish. In making the bed at night, let the sides be higher than the centre, to protect the back from the sides of the stall. Have the clothing warm, and let it cover the chest well. Perhaps some will object to clothing as not being natural; if we make a part of his life artificial, we must make the whole of it so. Is it natural to ride, to drive, to shoe, to feed him on grain? How long would a horse in his natural state live in the city? If by a certain mode of treatment, we can develop him and make him better fitted for our work, is that not the best way? God does what is best for him while in his natural state, and has placed within our power means to make him valuable to us.

Feeding.

The food of the horse generally consits of oats, with a change to cut feed. Cut feed is merely hay cut into pieces of two or three inches in length; this wet with water, and then rye or wheat bran, or corn meal, or a mixture of all, mixed with the hay. This is given at night, because being harder to digest on account of the water. This seems contrary to the good old doctor's advice,—"*eat light at night*," but horses breathe purer air, and hardly ever sleep until midnight, as they are enabled to get a great quantity of rest standing, much more than any other animal. At night give a little hay, and if you do not intend using him in the morning, a little then. I think one of the reasons of a horse learning to crib is, that, not allowing hay to expand his stomach to a reasonable size, he chooses a bad substitute, wind, although it is said by some that a horse cannot swallow wind, except with the saliva, which little then swallowed aids digestion. If you wish to have your horse in a condition to perform fast work, for a short distance, a small stomach is best, but if you wish strength to stay the distance, let the stomach be of good size, and give plenty of work to keep the wind clear. The smaller the stomach the larger the lungs, and for this reason admits speed; but there is danger of drawing them too fine. Give now and then carrots, parsnips, turnips and potatoes. They regulate the bowels and restore the tone of the stomach. A mixture of roots and oats or feed is good.

Give water often. Rain is the best, if good, but rarely found so. A capital drink is formed by stirring into the water meal, and letting it stand a few minutes before giving. Feed for fast work four hours before driving, and then drive slow until the bowels are empty. Fast work suspends digestion, slow facilitates it. If worked on a full stomach, it is apt to cause fermentation, thereby causing inflammation and colic. Of course it is known that a horse never ought to be fed or watered while warm.

Driving.

Have the throat latch and check rain loose, to let free circulation of air through the windpipe. Martingales, either standing or waving, are not fit for a horse, pulling his head between his legs, preventing their fore legs stepping well out in front, making him liable to cut them with his hind foot. Have the britching loose, so as to prevent chafing of the quarters, and also to let him stride naturally. The breast collar is better for light work, being cooler, and the English for heavy work, as it presents a larger surface to the shoulder. Drive easy the first few miles, then brisk, and towards the end of the journey slow, so as to bring the horse in cool. If brought in sweaty and muddy, remove with the sweat knife, (or what will answer as well,) a bit of rounded wood, what will come off easy; then clap on the blankets, and walk him until cool, when groom him.

Perhaps this "care of the horse" will be laughed at as only applying to city horses. Is it not just as desirable for the farm horse to be as well cared for as the city horse when he does as hard work? Is it not a duty towards him? How often we see horses after working all day, come in at night covered with mud and turned into the stable to sleep upon a board floor. Is it better for a man to have the pores of the skin stopped by dirt or kept clean, to sleep upon a board floor or upon a bed? Is it charitable to leave the horse in the field without any food, while the master goes to dinner? Why can he not wait until night? Is he worked harder than the horse? God has made the stomach of the horse such that it digests food easier than most any other animal, and why is this, if not so that he can almost always be in condition to use? In the field the horse is almost continually eating, and if the digestive powers were not very active, would he be enabled to eat as often and as much as he does? It is not from motives of selfishness, as he receives double the quantity at night, and then the stomach being weakened by long fasting, it is not able to digest the large quantity hunger dictates to be eaten, so fermentation ensues, and colic or inflammation carries the victim off.

One who has tried it.

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Corn and Potatoes Together.—John Elmore of Lorain Co., Ohio, writes to the Ohio Cultivator of several experiments in planting corn among his potatoes, by which he thinks he saved the latter from rotting, and got a fair crop of the former. A small variety of corn should be selected, and only planted between every other row.

CULTURE OF ASPARAGUS.

We are indebted to John Harold, Esq., Sec'y Queens Co. Ag. Society, N. Y., for the following statement of a crop of Asparagus grown by Mr. Peter Cock of Oyster Bay, and for which the first prize of the Society was awarded to Mr. C.:

The plot of ground contains 7 acres and 7½ rods, planted in rows 4 feet apart. To be understood, divided it into 7 equal parts—3½ parts have been cut 7 years—1½ parts 4 years—1 part 2 years; and 1 part, planted this last April, has not been cut. The one part cut two years, was cut but a short time, therefore but little was obtained from that.

The farm is located near the salt water, and the plot has a slight southwest exposure. The soil is a sandy loam, and from continual manuring is in good condition. The manure used is New-York stable—70 loads of 14 bushels each, (but which do not actually measure when received, over 10 bushels,) to the acre, put in deep drills between the rows. The crop is cut with knives, and put up in bunches 7½ inches long, 5 inches diameter, weighing 3½ pounds per bunch. Commenced cutting April 30, ended June 19th. Highest number of bunches cut on any one day, 453. Lowest number, on the first day, 7. Average number per day, 213.

The crop was sold in New-York at 21 cents per bunch, to be delivered at the landing.

Amount sold, 9,155 bunches at 21 cents,		$1,922.55
LABOR AND EXPENSES.		
420 loads manure, at 60 cents,	$252.00	
Unloading and carting on the grounds, 4 teams and 7 men, 1½ days at $14,	21.00	
Preparing the ground for manure, plowing and harrowing, team and man, 8 days at $2.50,	20.00	
Cutting and bunching, 229 days at 75 cents,	171.75	
Carting to the landing 40 loads at $1,	40.00	
Use of boxes,	5.00	
Clearing up the ground, man and team, 4 days at $2.50	10.00	
Plowing and hoeing,	10.00	
		549.75
Net profit,		$1,372.80

Number of bunches cut for 3 years: 1858—5 acres, 6,592 bunches; 1859—6 acres, 8,156 bunches; 1860—6 acres, 9,155 bunches.

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HORTICULTURAL PHOTOGRAPHS.

A correspondent of the Horticulturist suggests that societies which offer premiums for the finest flowers and fruits, procure photographs of those which are chosen as the best, giving the exhibitor a copy, and keeping one on its records. Additional copies might be taken and offered for sale to reimburse the expense.

Would not a photograph of this kind be more highly prized by a successful competitor, than the more expensive premiums in money or in medals?

We may add that but few common artists know how to place an object of this kind, in order to obtain the best picture. We have seen some that covered the whole plate, in one confused mass, without any relief, or without the effect having been studied of a strong and proper light. To appear well, the object must be clear, distinct, and alone,—the simpler the better,—and must be relieved by a back ground that will assist these requisites.

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THE CUYAHOGA GRAPE.

F. R. Elliott of Cleveland, who has an extensive acquaintance with fruits, gives the following opinion from examination of this new grape: "It is nearly as large as the Catawba—has compact bunches—is the color of Rebecca—and a delicious, sprightly, aromatic grape, far better than Rebecca and Diana but not equal to Delaware. Its size, color, and quality, place it without question among the best of hardy grapes. As an amateur grape, it is indispensable."

[For the Country Gentleman and Cultivator.]

WASH FOR BUILDINGS.

Editors Co. Gent.—In a former number of your paper, I noticed an inquiry for a recipe for some durable wash. In 1850 I built a stone house on a tolerable high hill, 38 by 42 feet, three stories high. It was dashed on the outside with mortar composed of the best lime and sand that Chester county affords; but there were numerous small cracks in the mortar when it dried, by which the blowing rains found their way through the wall; and having noticed hydraulic cement, mixed with milk, and put on with a whitewash brush, highly ercommended in the Co. Gentleman, I applied it to very considerable advantage. During the past season I procured another barrel of the cement, and gave it another coat. The cement and milk alone affords quite a handsome color; but some of the late blows that we have had still penetrate the building, particularly over the windows. This wash was said to answer equally well on stone, brick or wood, and I think the colors vastly preferable to lime whitewash without coloring.

A short time ago I met with an account which states that "parts of the palace at Westminster, England, which were fast going to decay, have been restored by the application of the silicate of soda solution, washed after drying, with dilute muriatic acid, so as to render the soda soluble, when it washes off with rains, &c, leaving behind it an indestructible coating of pure silica or flint, on which not even the hardest scrubbing with wire brushes and water makes any impression. Applied to iron in a somewhat similar way, it forms a coating that will preserve the metal from rust. The roofs of the Clock and Victoria Tower, to which it has been applied, are bright and clean as when emerging from the foundry. It adheres to a metal surface so tenaciously, that in attempting to remove it the chisel chips off the iron with it. It appears indestructible by the elements, and is uninjured by long immersion in sulphuric acid." Now if some kind friend who is competent to do so, would give us the desired information relative to the propable cost and application of said ingredients, I shall (and probably many others will) be very much obliged.

Highland Rome, Pa. Joseph Cope.

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[For the Country Gentleman and Cultivator.]

BLACK HAMBURGH FOWLS.

Of all the gallinaceous tribes, the Hamburghs are beyond all other breeds especial favorites of ours. There are none, perhaps, except the game cock, that approaches them in symmetry and brilliancy of plumage. The Black Hamburgh, which differs in nothing from the class to which it belongs, except in color, which is a brilliant black, with rich glancing metalic tints. Their plumage is also compact and close, and in good specimens they attain a depth of tone seldom surpassed by any other variety. The brilliancy of their plumage contrasts favorably with the coral red of the large double rose comb, pointed and terminating in a single pike behind, which extends far back and curves gently upwards, wattles large, round and red, with a well developed white ear-lobe; tail ample and flowing; legs tapering, and of a dark color; carriage lofty, with a brisk and spirited bearing. The shortish, small legs and generally compact form are no less pleasing to the eye than valuable in an economical point of view, as indicative, technically speaking, of the comparative absence of offal.

The Black Hamburgh fowl is but partially known in this country, and seems to be another fine variety which the ardor of research has recently gained for us. They are profitable fowls to keep, being excellent layers of good sized eggs, and not large eaters, and rather inclined to roam, by which means they procure, when allowed their liberty, much of their living in the summer months when worms and insects abound. They are hardy, and the chicks, unlike the Spanish, come early into feather.

With this variety of Hamburgh fowls we must contess ourself not much acquainted, having only had them in possession for two years; but our experience has been sufficient to form an opinion of their merits. The weight of the cock birds 4½ to 5¼ pounds, that of the hens 4 to 5 pounds. As to the quality of their flesh, we cannot express an opinion, having never tasted of their meat.

The hen is of a fine, round, plump shape; in form they closely resemble their cousins, the Golden Spangled Hamburghs, and may bear the same relationship to them that the Black Shanghais do to the White, and other colored birds of that breed. C. N. Bement.

FATTENING TURKEYS.

A writer in the Germantown Telegraph furnishes that journal with the following statement: Much has been published of late in our agricultural journals in relation to the alimentary properties of charcoal. It has been repeatedly asserted that domestic fowls may be fattened on it without any other food, and that, too, in a shorter time than on the most nutritive grains. I made an experiment, and must say that the result suprised me, as I had always been rather skeptical. Four turkeys were confined in a pen and fed on meal, boiled potatoes and oats. Four others of the same broods were also at the same time confined in another pen, and fed daily on the same articles, put with one pint of finely pulverized charcoal mixed with their meal and potatoes. They also had a plentiful supply of broken charcoal in their pen. The eight were killed on the same day, when there was a difference of one and half pounds each in favor of the fowls which had been supplied with the charcoal, they being much the fattest, and the meat greatly superior in point of tenderness and flavor.

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Making Vinegar.

Vinegar, according to a writer in the Genesee Farmer, is cheaply made. We republish his recipe:—To eight gallons of clear rain water, add three quarts of molasses; put into a good cask: shake well a few times, then add two or three spoonfuls of good yeast cakes. If in summer, place the casks in the sun; if in winter, near the chimney, where it may warm In ten or fifteen days add to this liquid a sheet of brown paper, torn in strips, dipped in molasses, and good vinegar will be produced. The paper will, in this way, form what is called the "mother," or life of vinegar.

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The Country Gentleman's Ink.

[*For recipe see Cultivator for* 1860, *page* 51.]

This ink is cheap "and black as night,"
It flows superbly while I write;
Four cents a quart is the expense,
And by the gallon just nine pence.

Excuse the poetry, Messrs. Editors, and if more is wanted, please call on some one else, as over-taxing the brain often proves disastrous. Let me say, however,—in simple prose—that having made a quart of the ink according to directions, I think it far better than any I have been able "to buy at the store" for a long time, and would recommend it to all who wish a good article of writing fluid. J. L. B.

Jefferson Co., N. Y.

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[For the Country Gentleman and Cultivator.]

Recipe for Making Vinegar Quickly.

Messrs. L. Tucker & Son—You wished for one of your readers a recipe for a speedy method of making vinegar.

For one barrel, take 2 quarts of molasses and 15 gallons of hot water, and stir well together, and while hot put into a barrel half full of worked cider. Stir well together, and in about two weeks it will be fit for use. Jersey.

P. S.—I should prefer less water; and more time I think would make a vinegar that would suit me better; but from the above recipe and our best Jersey cider, the vinegar would be far superior to common cider vinegar.

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[For the Country Gentleman and Cultivator.]

What Makes Butter Streaky.

We have recently met with this question, and would reply that the only cause for streaky butter ever occurring in our experience is the insufficient working of the salt through the mass. Unless great care is used, butter is always of different colors before the first working (after salting.) Some portions will have little or no salt, and be of a lighter color, and the dairy-woman should work so as to mix these portions with that thoroughly salted, or she will have streaky rolls or tubs of butter. A very little care, when working the second time, will prevent this result. B.

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The manufacture of oil from coal is likely to be introduced extensively into the State of Arkansas, as the coal appears to be well adapted to that purpose.

BRIEF EDITORIAL MEMORANDA.

As mentioned in the last number of the Country Gentleman, the writer week before last, had the pleasure of visiting Franklin County, Mass., for the purpose of being present at the opening meetings for the season of several of its most flourishing Farmers' Clubs, and addressing them upon subjects connected with the improvement of American Farming. A fall of snow on Tuesday, and during Tuesday night, was sufficient to put the roads in excellent order for the sleigh, and—in the escort of J. S. Grennell, Esq., of Greenfield, to whom we have on previous occasions acknowledged our indebtedness for many kind attentions—we can only express the hope that our four days and evenings passed off as profitably for all concerned, as they did, pleasantly as well as profitably, for us.

The Greenfield Farmer's Club.—The meeting of this club, particularly referred to last week, was quite an informal gathering of Farmers only, where we talked over matters together, very much as we might have done at the fireside of each —answering and asking questions in turn, so as to elicit mutually as much information and as many facts as possible. President, H. C. Newton; Vice President, Fred. G. Smith; Secretary and Treasurer, J. S. Grennell.

The Bernardston Farmer's Club and Agricultural Library Association.—The Bernardston Farmer's Club and the Bernardston Agricultural Library Association, consisting of sixty members, at their late annual meetings had voted to unite the two and organize under the name of "The Bernardston Farmer's Club and Agricultural Library Association." John Sanderson, President; Isaac Barton Isaac Burrows, Nelson Burrows, Imla K. Brown, John F. Hale, Loren B. Slate, and Dr. Wm. Dwight, Vice Presidents; Samuel J. Lyons, Secretary; Almon Newcomb, Treasurer; Alanson P. Hale, Collector; Daniel W. Temple, Librarian; Hon. H. W. Cushman, P. L. Cushman, and Silas N. Brooks, Executive Committee.

Here we spent Wednesday evening—the commodious rooms of the Powers' Institute being well filled with members of the Association and their families, while several gentlemen and ladies were so thoughtful as to have provided music expressly for the occasion, thus assisting very materially in diversifying and enlivening the proceedings. We have seldom seen so large an assemblage, so attentive during the presentation of practical farming matters; for more than two hours, and until the distance between the Institute and their homes became a matter for quite serious consideration on the part of many who were present, the interest of all appeared unflagging in the address delivered, and in direct questions put according to the agreement made at the beginning by the President, especially with regard to English farming and farmers.

The Sunderland Farmer's Club.—The sleigh-ride to Bernardston had carried us about seven miles to the northward, and the return to Greenfield was made—after fortifying ourselves by accepting the social hospitalities of an attentive friend—under the brightest and most starry possible of skies. The next evening (Thursday) we turned our faces southwardly for ten or eleven miles, to Sunderland, where a kind greeting awaited us from the President of the Club, W. Austin Smith, Esq. The Town Hall had few vacant seats, and the same interest was shown —the meeting again continuing in session for over two hours. We were pleased to find this club—like the others —in a condition evidently so prosperous. The Secretary is Mr. John M. Smith.

The Wapping Farmer's Club.—We feared that we should be unable to meet our friends at Wapping, as was the case with those at Shelburne—from lack of time, but finally determined on Thursday to remain over for the purpose of spending the next evening with this well established and flourishing club. The School House here contained an excellent representation from the farmers of the vicinity, as well as their wives and sons; nowhere was there more alacrity shown, after the address was over, in suggesting inquiries to the speaker, or inquiries put which displayed more intelligent thought upon all the practical bearings of the topics discussed; and notwithstanding the previous determination on our part to get through at a somewhat earlier hour than before, the time passed by unnoted, and it was it anything rather later than usual when the meeting finally adjourned. The President of this club is our friend James Childs, and the Secretary Albert Stebbins. It was organized a number of years ago, comprising some of the best farmers of this part of Deerfield, and it would have been a source of much regret had circumstances compelled us to forego this opportunity of witnessing their proceedings and becoming acquainted with so many of their members.

Oxford-Down Sheep.—We were interested particularly in seeing at Greenfield, the excellent Oxford-Downs lately purchased by Mr. Grennell from R. S. Fay, Esq.—Mr. G.'s flock now includes about thirty pure bred, among which are several imported, together with a number of crosses of the Oxford-Down upon the Irish Smut, which showed to good advantage the improved results obtained by the infusion of better blood, both as regards the mutton and the wool of the grades. Mr. S. A. Smead is associated with Mr. Grennell in the ownership of some of these sheep, and there can be no doubt of their effecting a great amelioration in the character of the flocks of the neighborhood. Mr. G. at our request, kindly promises to furnish, as soon as his leisure permits, an article upon this subject for the Co. Gentleman. Among other stock upon the place, his Chester County pigs, obtained through Paschall Morris of Philadelphia, are worthy of especial note, and are winning their way to general favor.

The Great Sanderson Ox.—An allusion has heretofore been made in these columns to the Great Ox owned by Mr. Sanderson of Bernardston. We had the opportunity of seeing him for a moment, in the evening by lantern light it is true, but sufficiently well to speak understandingly when we add that it justifies all that has been said of it. Taller and *bonier* oxen we may have seen, but never, we think, an animal of the cattle kind, of corresponding weight and at the same time so well made and well developed, so evenly fatted, so square and perfect above, below and at both ends. It is supposed to weigh now about 3,500 lbs., but has not been lately brought to the scales owing to the inconvenience of getting it about. Unless there is something more deceptive in the light of a lantern than we are prepared at present to believe, it will be long before we look upon its equal.

It is necessary, however, that these Notes should be brought to their conclusion; and, in again presenting our acknowledgments to Mr. Grennell—for the arrangement of our time, which could scarcely have been done to better advantage, as well as for having devoted his own so freely to the purposes of the visit—we should also tender our thanks to the officers and members of the clubs referred to, for their cordial greeting and numerous marks of attention. Engaged as we believe they are in a good work, their example is one that may be safely commended to farmers elsewhere,—in the establishment and general support extended to organizations calculated to advance interests so important and to exert influences so beneficial. It is therefore that we have thought it well to devote so much of our crowded space to the publication of the Memoranda of this visit,—which, if it shall have at all contributed to strengthen these agencies of Improvement, or to incite more earnest and intelligent aspirations after its accomplishment,—will have had a reward far beyond the enjoyment we derived as it passed. L. H. T.

WINTER WORK.

Of course all out-of-door work in the garden, in northern latitudes, is suspended until spring. There are many things, however, relating to the Flower and Kitchen garden which may be attended to in the winter. All plans for laying out or altering the arrangement of the garden should, by all means, be considered in the winter. This is a season of leisure: every subject may receive due attention and be thoroughly discussed in the family circle. What kinds of trees and shrubs should be purchased, the positions they are to occupy with reference to the best effect, the flower and vegetable seeds to be procured, these are matters which should not be left until the very last moment, but which may well claim and should receive serious attention.

There are also many practical matters to be attended to during this season. Flower and vegetable seeds which have been collected, should be carefully cleaned from sticks, dust and chaff, put in small, neat paper bags and carefully labelled so that when the time comes for planting, there need be no *guess work*. How often is it the case that when seeds are wanted for planting, all the odd nooks and corners of closets are ransacked for "that bundle of seeds." When it is found and opened, the different varieties are found in twisted bits of newspaper or tied up with a short piece of thread or yarn with no label, or else, having had labels tucked into the strings, they are all found detached from their appropriate parcels, and only serving to show that the seeds are *somewhere* in the bundle. Or else the papers not being tied, the seeds are all mixed together in the bottom in admirable confusion; melon, cucumber, radish, mignonette, balsam, and four-o'clock seeds, all in what a printer would call "pi." Now all this might be avoided by half an hour's labor in making paper bags. The children would be delighted with such an occupation. Make them one as a pattern and they will soon have ready an assortment of the various sizes. When ready to put away, be careful to place them where the mice or roaches cannot get at them, or you may chance to lose many of your most valuable seeds. Do not put them away so carefully as to forget where they are, however.

Labels for fruit trees, shrubs and plants should be prepared in winter. Take time enough to make them neatly, paint one side with white paint, put copper wire on to fasten them with, and you have labels which will remain legible, when written with lead pencil, for years. Labels for plants should be a foot long to allow them to be thrust a sufficient distance into the ground.

All rods, whether of wood or wire, should receive a coat of paint, and be tied in bundles and stowed away. Bass matting should be procured, shears, pruning knives and all similar instruments sharpened, the spades, shovels, hoes, &c., cleaned and put away in a dry place; vases, garden seats, wire trellises, and all similar ornaments should be painted if necessary, and stowed away under cover.

These are things which should be attended to. There are probably others which I do not think of. This one rule, however, should be observed: do everything which it is possible to do during the winter. Leave nothing for the spring except those operations which can only be performed then and which will surely be found pressing enough without unnecessarily adding to their number.

G. B. H.

[For the Country Gentleman and Cultivator].

AMERICAN BLACK RASPBERRY.

As I am writing, I will tell you about my raspberries. Three years ago last spring I set out a row of the common black raspberry, just thirty steps long, and from those we picked the last summer three bushels, or 96 quarts, beside some picked for the table that we did not measure. We picked 18 quarts every other morning.

My object in writing this, is not to tell a big story, but simply to let my brother farmers know that with very little labor they can have a fine lot of as nice fruit as any body need have, and not have to send off for some new kind at high price. I will simply say that this row takes up no ground but what was occupied, as is too common, by grass and weeds. As to culture, I dug holes from three to four feet apart, and set out bushes or canes. Then having a pile of rotten chips, I took my wheelbarrow, wheeled them on, or enough to bury the grass, say from four to five inches, and that kept nearly all the grass and weeds down. Then after they had done bearing, I cut out the old stocks to let the young ones grow, simply pinching the end off where they were growing too long.

Laporte Co., Ind. C. F. WEBSTER.

[For the Country Gentleman and Cultivator.]

Scale or Bark Louse.

Remove this unsightly pest from your young fruit trees by applying a wash made of potash water, or if not convenient to obtain the potash, use a strong decoction of lye. Apply with a cloth or brush on a damp day. L. J. T.

VALUABLE RECIPES.

[The following valuable receipts, from an intelligent and skillful lady residing in New-York city, although mislaid or delayed a year, will be none the less useful at the present time. They allude to a former receipt from a Keokuk correspondent, and on reading them to a lady who resides between New-York city and Keokuk, and who never had the dyspepsia, she maintains that the pie is still quite too rich; and she thinks that the truth lies between extremes—geographically considered in the present instance, and she would use much less lard, butter and sugar, and for her own taste, would omit nutmeg.—EDS.

Lemon Pie.

"She can't beat mother's lemon pie," said my son, who has a special regard for pies in general, and lemon pie in particular. I was of the same opinion as I read NANCY's recipe in your number for October 20, 1859. It is too rich, for it would soon produce dispepsia in New-York city, if harmless in Keokuk. I send you my recipe:

Take two quart bowls; in one squeeze three lemons and extract the seeds. In the other beat three eggs, with three teacups of sugar, grate in some nutmeg, and set them aside. After mixing the crust, which I do with half a pound of lard to rather more than a pint of water, sometimes rolling it out and spreading on it a quarter of a pound of butter—at other times omitting most of the butter—put the under crust on two plates; then mix the contents of the two bowls, pour it on the crust, cover them with the top crust, and bake immediately, as the lemon juice and egg soon harden together.

If a more simple pie is liked, add a teacupful of boiled corn starch. No milk.

Sally Lunn.

I am tempted to send my recipe for this most delicious tea bread, which, once eaten at your table, will cause your friends to rejoice when asked to come again.

Take a stone pot, pour in one pint bowl of sweet milk, half a teacup of baker's or other yeast, one-quarter of a pound of melted butter, a little salt, and three beaten eggs. Mix in about three pint bowls of flour. Let it stand several hours, or until quite light; then put into Turk heads or other tin pans, in which Sally should again rise up before being shoved into the oven, to be "brought out" and presented to your friends as the beauty and the belle of the evening. WOOD.

[For the Country Gentleman and Cultivator.]

John Johnston in Duchess County.

Messrs. Tucker & Son—In my last, I had left the farm of the Hon. Wm. Kelly, with the view of calling on Charles S. Wainwright, Esq., some seven miles further north.

I found the land rather rough, with many rocky ridges. What is not rocky seems to be excellent soil, but under a bad state of cultivation, and I saw several loads of baled hay being taken to the harbors on the river, to be shipped to the city. So long as farmers continue to sell everything they raise, in place of making it into beef, mutton, pork, or butter and cheese, the land will get poorer and poorer; and I should think the farmers must get poorer, too, as I don't believe any farmer can afford to buy manure at city prices, have it shipped from 75 to 90 miles up the river, then draw it some miles to his farm, and make it pay; and surely stock must pay as well and much better in Duchess county, than almost any county in the state, they are so near the best market in the United States.

I found Mr. Wainwright at home, and I took a deal of pleasure walking over his farm, and looking at his beautiful Devons. He has 25 Devon cows that I have never seen equalled; they were more uniform in appearance than any equal number I ever saw. When I mentioned that to Mr. W., he said there were some 18 or 20 all descended from one cow. They are as beautiful a lot of cows as any man can wish to see, and Mr. W. gives no extra feeding over what every farmer ought to give. He feeds no grain but to his calves the first winter. He raises some turnips and mangolds, and feeds his cows a few in winter. (By-the-by, I saw mangolds there, weighing 21 pounds each.) Mr. W.'s calves were beautiful. I always think Devons show best in calves. These were very fine. He has a number of bulls, one imported, a very fine animal, but he has one of his raising I thought better. He had also a six year old pure bred Devon heifer that never had a calf. He has fed her fully for some two years. She is small, but very fat, and weighed a little over 1,500 pounds. He expects to sell her this month for Christmas beef. His price was $150. Some would think that an enormous price, but if such men would make such beef and count the cost, they would find they were not making a fortune. Making up such cattle requires much feed, besides close attention.

Mr. W., like Mr. Kelly, has few division fences, yet Mr. W. plows a considerable portion of his land. He has tile drained much of his land, and is now going to drain more thoroughly, and put his drains only 20 feet apart. He says his subsoil is very stiff, but that Thomas' drain plow lessens the cost of draining immensely—more than one-half of the former cost of digging. He first opens his drain with a common plow, throws one furrow to the right and another to the left, and puts the drain plow to work, which expedites the business so that draining is not *much of a job*. I noticed over his drains the same evidence of their utility as on my farm, and other farms in this neighborhood. His aftermath on his meadows had not been pastured since mown, and any one could see every drain plainly marked by the more luxuriant clover and grass right over the drain.

I found Mr. W. a little like many other people who think it owing to that being so much drier than other land; but that is not the cause, as thorough drained land is just as dry in the centre between the ditches, as it is over the drain. The cause of the more luxuriant growth of the grass or grain over the drains, is the mixture of the subsoil and soil to a depth of 2½ to 4 feet; and if Mr. W.'s land, and my land, and thousands of other men's land, could all be cultivated as deep as our drains are, they would all bear just as luxuriant crops as that over the drains. The first crop after draining, on the top of the drains, is seldom good unless care is taken to have the top soil put by itself, and filled in the last. I have drains that have been made from 16 to 18 years, and when in crop or meadow they can be *traced* as plainly as if they were laying open. Then again if in pasture, if there is not stock enough in the field to eat up the grass as fast as it grows everywhere, (which is, I am sorry to say, too often the case on many farms,) you can then trace the drains, by the horses, cattle, or sheep, eating the grass close to the ground on the top of the drains. This is not because the land is dryer, but because, by being mixed and loosening the subsoil to the depth of the drain, the herbage is made sweeter and more nutritious, and stock of all kinds like it much better; and if all our land could be loosened the same depth, we could not only keep more stock on the same land, but make them much better. I have been trying for some years past to plow a foot deep. Even that makes a wonderful improvement on both grain and grass. I know a foot deep is not thought deep plowing by some farmer's talk, but when they measure accurately, and find they have a foot in depth, they must have a furrow of about 16 inches in width, and it is but seldom we find a plow but what requires the furrows to be one-third wider than deep, especially if the furrow is near a foot deep.

I am fully of the opinion that if Mr. Wainwright drains his land some 33 feet apart, and gets his plow down so that he can turn over a furrow one foot in depth, that he will find his crops of every kind more luxuriant, but not for the first year if in a spring crop. Deep plowing should be done when the land is to be summer fallowed; then the fresh turned up subsoil gets sun and air for months before the grain is sown, and also gets mixed with the soil by the repeated plowings and harrowings, and the more of that the better in that case.

I know that some farmers will boldly tell you that you should never plow but once for a crop of any kind, but these men speak without thinking that *circumstances alter cases*, and in this case I think I know what I am talking about, and have thought much on the subject.

I had almost forgotten to say that Mr. Wainwright's dwelling stands in as pretty a situation as is to be found anywhere. From the door or windows you have an extensive view of the North River, I think some sixteen miles. When I was there it was covered with sailing vessels.

Mr. W. says he has never known so little demand for pure bred stock of all kinds, as this year. I remarked that I thought it was caused by the alarm about the cattle disease, but he thought not. He has many fine Essex pigs; formerly he could not supply the demand, but this year he has sold none, and is getting over stocked. They are beautiful pigs, and quite fat on pasture only. He says he would sell pure Devon bulls at very reasonable prices, and I think there is no better bred Devons anywhere. He has but few sheep, but those are very fat. I think those North River farmers keep too few sheep. I find no stock that pays me better. John Johnston.

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[For the Country Gentleman and Cultivator.]

SAVING MANURE.

Messrs. Editors—It is an important matter with every farmer, to learn the best manner of husbanding his manure. Several plans are suggested for effecting this purpose, but it is difficult for one who has had little experience to determine which is the best. One is that adopted by Alderman Mechi, described in one of the letters of your junior editor, during his absence in Europe. This has been tried by one or two farmers on this side of the Atlantic, and with apparent satisfaction. It has occurred to me, however, that the vapors arising from the manure vats would be injurious to the animals standing over them, especially in the close stables generally used in this vicinity. The expense, too, of constructing the boxes and vats is so considerable, that the benefits derived from the arrangement would hardly repay its cost. I would therefore inquire whether a less expensive plan of saving the manure would not be preferable?

I have two modes in view. One is that advised by Thaer, namely, the construction of a basin in the barnyard into which the solid excrements are put. The liquid excrements are also conducted into it by means of a trough leading from the stables. The sides of this basin are to be made high enough to prevent any waste by washing, and a pipe is placed in the center, to lead off the urine after it has moistened the solid portion of the manure, or any excess of moisture caused by rains, and conduct it to a tank below. Would this plan obviate the disadvantages of a want of protection, or would it be better to construct a shed to keep off the sun and rain, and have the manure tank entirely separated from the basin provided for the solid excrements? Your advice as to the best arrangement to be adopted by one who has made a selection of none, will much oblige your correspondent. Or if you think any one of those mentioned cannot be improved, as they are recommended by high authority, please mention which one you would prefer. J. S.

Alleghany County.

We think Alderman Mechi's mode too expensive for common use in this country. The cheapest mode of drawing or delivering manure is to combine solid and liquid into one material by allowing the liquid to run into the depression where the solid part is deposited, and by adding enough straw, (cut is best,) dried muck, dried turf, or other substance, to absorb all the liquid portions, and retain them in a solid state, but no more than is necessary for this purpose, in order to prevent a needless cartage of matter. By sheltering the heap, and excluding the water of rains, it is obvious that a much less amount of absorbing substance would be needed. The mode which our correspondent describes, of drawing off the excess of liquid manure, is a good one; one of the best, perhaps, where it is desired to use a portion in the liquid state. The pipe should however be of good size, have considerable descent, and be well guarded at its upper end to prevent obstruction.

[For the Country Gentleman and Cultivator.]

CULTURE OF CARROTS.

MESSRS. EDITORS—The GENTLEMAN has contained several articles recently, upon the raising of carrots—giving the different modes pursued in their culture; and although cultivators agree in the main as to the mode of cultivation, yet they differ a *little* in the details.

This crop is a very important one, as it furnishes excellent food for cattle and horses during the winter and spring months—especially are they good for cows giving milk. But many are deterred from raising them, because they have the impression that it requires too much labor—it will not pay. With suitable ground for the crop, I think this impression erroneous. Most of the readers of your valuable paper, it seems to me, might adopt some one of the many methods given, so as to make it a profitable crop.

Let me add my method to the list already given, although it does not differ materially from that of others, except in sowing the seed. For this part of the work—which is often considered a task—I have an implement that suits me better than any thing I have tried; and as it is not patented, and is very cheap—mine cost twenty-five cents—all who wish can use it free of charges for one year at least, and any kind of seed smaller than potatoes can be planted with it, even in a high wind. I have one of Emery's seed-sowers, but cannot make it sow small seed—such as are sown with the brush—uniformly and even. The implement alluded to, is simply a tin tube, three feet long and one inch in diameter, with a tunnel (without the nose) five inches in diameter at the large end, soldered on to one end of the tube. With this, the operator can walk erect and sow the seed very expeditiously as will be shown farther on.

The ground should be plowed fine—narrow furrows—and as deep as possible, with a liberal coat of well rotted manure spread evenly and plowed in. Then drag and roll until the ground is brought into fine tilth—the last operation should be with the drag, so as to leave the surface fine and loose when the seed is sown.

Now open drills one inch deep, and the desired distance apart—if to be worked out with a horse, (which, by the way, I think too large a *machine* to work among things so wee as carrots in the second leaf, when they should be hoed and thinned if too thick,) two feet is near enough, and one foot if to be worked with the hoe. Let the rows be perfectly straight, as it will greatly facilitate the after culture.

To sow the seed have a bag, such as is used for planting corn, tie it in front of the person who is to do the work, put in the seed, and take the tin tube aforesaid in the left hand, keep the small end directly over the drill and close to the ground, and with the thumb and fore finger of the right hand scatter the seed into the tunnel top, and "go ahead." Walk a pretty "fair gait," and scatter the seed all the time. Of course, when the thumb and finger are to be replenished with seed, a halt must be made, but no more than will be necessary to take breath, for the work can be done very rapidly. Be careful to let the seed pass from the thumb and finger uniformly—this will do away in a great measure, the necessity of thinning. The seed being sown, take a hand or garden roller and run it over the drills to cover the seed and the work is done.

When the plants are up an inch or so, they should be hoed and thinned out, if necessary—some say to three or four inches apart —this would probably give the greatest number of *bushels* to the acre, but perhaps not the greatest number of *pounds*—besides I doubt whether *large* carrots contain as much nutriment as smaller or medium sized ones. This is merely a matter of opinion—let it pass for what it is worth. They should be thinned so that the plants shall not stand in bunches at any rate, and kept clean from weeds. The first hoeing is the greatest labor; when this is *well* done I consider the "battle fought and the victory won." The ground should afterward be kept loose and clean.

For the convenience of digging—as this is done with the plow—and for other reasons, I like to have the carrot patch long and narrow, so that the plow can pass up one side and down the other, taking a row at every turn, if the rows are but one foot apart—if farther than this, the better way is to turn a furrow every other time in going round, working up to within about ten inches of the row, and at the next turn see how near you can come to the row and not hit it, and the roots will pull very easy. Now, when the digging is finished, the ground is well plowed, and the dead furrow is in the centre; then in the spring, to fit it for another crop—it is better to use the same ground for successive crops—commence in the centre and back-furrow, and the ground is made level or a very little raised in the centre. In digging the roots after this fashion there is no use for the spade, if the team has a good chance to work out at the ends. I dug seventy rods of ground this fall in a day, with the help of a boy, without spading out a peck. The tops are taken off with a knife, and I think they will pay for digging and topping to feed to milch cows. My way is to draw them, tops and all, conveniently near to the cellar, so that they can be topped into baskets and carried directly in; this saves handling, and the tops can be saved clean from dirt, and if put into small piles, will keep fresh for several days for feeding out.

I prefer digging pretty early, before the ground gets very wet—say the last week in October, or the first week in November, as then the roots come out much cleaner, and for this reason keep better. A cellar is the most convenient place for storing them. J. L. R. *Jeff. Co., N. Y*

Bee Moths.

A correspondent of the *N. Y. Post* says that he destroys vast numbers of millers in the night, during the active season of these insects, by placing a well stirred mixture of molasses and vinegar upon a white plate, near the hives, and on a level with the bottom board. In the morning multitudes are found caught. A small glass lantern, set on the dish would doubtless attract them, but it might attract many other kinds of millers.

Inquiries and Answers.

Black Knot in Plum.—Can you inform me of any remedy for the black knot in plum trees. I have two fine ones that were attacked this fall, and several are entirely worthless from this cause. H. C. D. [Black knot in the plum cannot be cured, but it may be prevented. When it first makes its appearance cut it off clean; and keep cutting. If this remedy is promptly applied, it will be effectual—although some trees may become somewhat mutilated. The labor and attention need not be greater than for good cultivation. Some have told us that they tried this remedy and that it has failed, but on inquiry we have always discovered that there had been more or less neglect in its application—either that the disease had been allowed to extend for some time before any excision was made, or else the operation had been performed but two or three times in a season.]

Treatment of Colts.—I have two colts foaled in May last, and should like to inquire in regard to the proper way of feeding the first winter, the best kinds of feed, quantity, &c. I believe there are two ways of doing everything, and should like some hints from some of those who are accustomed to raising fine horses. H. C. D. [We hope some of our best horse raisers will give us their experience in relation to the winter feeding of colts. In the meantime we would remark that a sheltered yard, or a large loose box for each animal, may be the best place; and good hay, with a small regular feeding of ground oats, the best food. It is important that they should make a good growth, for which purpose they should have much nutriment. Corn should not be given.]

Hungarian Grass Hay.—I wish to learn through your truly invaluable paper, from practical men—those who have fed Hungarian grass hay—the proper way to feed it to fine stock sheep. Should it be threshed, or fed grain and grass together, unthreshed. Fayette. *Pittsburgh, Pa.* [We hope some of our correspondents will answer.]

Roadside Friut Trees.—I will feel myself under many obligations to some of your numerous horticultural readers, if they will furnish through the columns of The Cultivator, a list of the most suitable pear and cherry trees for the purpose of planting on the sides of a lane of about twelve hundred feet in length, the two kinds of fruit to be planted alternately. J. B. W. *Louisville, Ky.* [If planted 20 feet apart, sixty trees would be required on each side, for the 1,200 feet—or sixty pear and sixty cherry trees. The hardiest trees for that region are probably Flemish Beauty, Buffum, Lawrence, Sheldon, Tyson, Fulton, Onondaga, Urbaniste, and probably the Bartlett. Nearly all of these are free growers. The *heart* cherries do not do well there, consequently the dukes and morellos must be exclusively selected, such for example as Mayduke, Belle de Choisy, Late Duke, Belle Magnifique, Early Richmond, &c. Our correspondent should bear in mind that these trees will need good clean cultivation for several years after they are set out; and that if they must necessarily stand in weeds and grass, it would be about as well to throw them into the Ohio river as to plant them.]

Harrows.—What is the best kind of *flexible* harrow? Where made and by whom? Please give an engraving of some of the best kinds and oblige Many Readers. [Among the best are the Geddes harrow, and the double square Scotch harrow; both of which are figured and described on p. 293 of 2d volume of Rural Affairs, or the Annual Register for 1860. As we have inserted these figures a number of times in our columns in former years, it may not now be necessary to repeat the insertion. These harrows are made by most of the implement manufacturers in the northern states.]

Destroying Liveforever—Will you, in the next number of The Cultivator, point out the best method of eradicating liveforever, "Sedum Telephium." G. M. H. [We know of no better way than to bury it deep in the soil, by careful spading if in a garden; or by deep plowing with Michigan subsoiler, if in a larger field.]

Root Grafting.—Is it true that root grafting (particularly making more than one stock out of each seedling) has been found by experience to produce unhealthy and short lived trees? Information on the above question is solicited from such as have a practical knowledge. D. S. *Pike Run, Pa.* [We have propagated many ten thousands of trees in both ways, a considerable portion of which we have seen afterwards in bearing, and have discovered no difference in their vigor or productiveness. There are isolated experiments, the results of which incline to one side or the other of the question, according to various controlling circumstances; but most of those propagators who some years ago were strongly opposed to root grafting have now given up their former opinion on the subject. There is one exception—in the colder portions of the Western States, trees budded or grafted a few inches above the surface of the earth are less liable to injury by freezing at the point of union, than root grafted trees where the union is at the wet surface.]

Grape Cuttings—Will you please inform me when to cut, and how to preserve grape cuttings through the winter? Please state how deep they should be buried, and whether sand or earth is preferable. W. C. H. *New-York.* [Cut late in autumn, or any time after the leaves have fallen—select good, strong, well ripened wood. Take special pains not to let the wood become dry after it is cut—many persons are unsuccessful from this cause alone; or when such dried cuttings grow at all, it is often not till summer that they start. A good loam is best—we have, however, seen no difference in the growth of vines in the same plantation, one portion being strong clay loam, and the other light gravel, both parts having been well drained, subsoiled and enriched. The cuttings may be placed in any cool spot, and covered with sand or mellow earth. They have done well planted out late in autumn, if the soil has been in good order, and a winter mulch of manure applied. For winter keeping, a covering of a few inches will answer. Be careful they do not become too wet or water soaked, or they will certainly fail to grow.]

Alsike Clover.—We have several inquiries for the seed of this plant. If any of our readers know where it can be had, and the price, they will oblige several subscribers by giving us the information.

Rats.—In your issue of Nov. 8, "Hurley" wishes to know how to rid his farm of rats without poison. A rat terrier is the best thing we know of, and he will say so too if he will try one. H. J. D. *Champaign, Ill.*

Grain Weevil.—H. K. of Wrightsville, Pa., wishes to know how to destroy the Grain Weevil. We were successful in ridding our barn of the pest, by wintering sheep in the bay after the grain is thrashed. Every season, as soon as the bay was cleared, they occupied it until time to turn to pasture.

Near New-Haven, Ct. M. W. G.

Underdraining.—I am making some experiments in draining, using plank instead of tile or stone, neither of which can be had here. I take two plank, one four and the other five inches wide, and one inch thick, and nail them together thus Λ, forming a triangular channel for the passage of the water. What I wish to know is, will the water find its way under and into them when the subsoil is a stiff clay, there being joints only every twelve feet? Would it be better to put some fine brush or straw in the bottom of the drain before putting in the plank? J. R. G. *Christiansburg, Va.* [There need be no fear that the water will not find its way into the channel—to say nothing of the seam between the boards, there will be a small fissure between the lower edge of the plank and the bottom of the ditch—or if the plank sinks into the soft bottom, the pressure of the water in the soil will drive it into the channel. If water can find its way ten or twenty feet horizontally in reaching a drain, as it always does in every drained soil, there will be no difficulty in its passing an inch or two beneath the board; while the upward pressure of all liquids will cause it to occupy the channel made for it.]

Rural Architecture.—I saw a design for a farm house in your valuable Cultivator for November. I am wishing to build a modern style dwelling in a country village, and wish you, if consistent, to inform me where the architect of said design resides, and also what author has published the best book on Rural Architecture, and where the volume may be procured. L. N. *Onondaga Co.* [The design referred to was one of half a dozen prepared for and published in our Illustrated Annual Register for 1860, by Geo. D. Rand of Hartford, Conn. There are several valuable works on Rural Architecture—those of Downing, Vaux, Allen, Wheeler and others, varying in price from $1 to $5.]

Lime in Orchards.—Will some of your numerous readers who may have had experience in the application of quick lime to orchards, be pleased to state through the medium of your valuable periodical, the effects produced. My own observation almost convinces me that its application to fruit trees, with any degree of liberality, is pernicious. Several orchards in this vicinage, which gave great promise in their youth, after having been treated with lime to the depth of three or four inches around the roots annually for some years past, are now stunted, and decidedly in decline, producing little fruit and that of very inferior quality and size, and in fact exhibit the appearance described by Pope, of

> "Stunted hide bound trees that just have got
> Enough of sap at once to bear and rot."

Ernest Town, C. W A Subscriber.

CARE OF SHEEP IN WINTER.

Those who make wool-growing a prominent part of their business, usually give their flocks more or less careful attention in winter, but these animals are often neglected to the great loss of their owners, especially by those who keep but small flocks and make other branches of farming their main dependance. Insufficient food and total lack of shelter, often cause death to decimate the flock; and a still greater loss is sustained in the reduced fleeces at shearing, and in the death of lambs in spring, for in value both depend much on the care previously given.

We have reiterated frequently the maxim, that "sheep should be kept in good condition at all seasons of the year," but would call especial attention to the fact above stated, that it is important at this time from its influence on the next wool clip, which will be light or heavy as the sheep keep up, *without check*, the condition they have attained through the grazing season. Speaking on this point, a writer in the Michigan Farmer has said—and we quoted the full paragraph a year ago—that when sheep lose their condition in November and December, the want of food has the effect of stopping the growth of the wool, completing the end of the fibre, which then becomes changed and dead, in a manner analagous to the stem of ripe fruit; and a renewal of good feed after these months, and after the growth of the wool has once been stopped, only prepares the skin to send forth a new growth that pushes off the old fleece, and causes it to be lost before shearing time.

A large share of the profit of sheep husbandry arises from the increase in lambs, and, as hinted above, their number, hardiness, and value, depends largely on the condition of the ewes in winter and spring. "One of the greatest sheep breeders has declared that sheep, highly fed about the time the buck is put with them in the fall, will almost invariably have two lambs a piece, and that these may nearly all be raised by proper attention to the mothers." Whatever share of truth there may be in this, it is unquestionable that sheep in good condition produce better lambs and take better care of them, so that they raise a much larger number than those in poor condition. It is getting to be the practice with many of those who keep pure-wool sheep to turn in the bucks about the 1st of December, that the lambs may not begin to come before May, when sheep may usually go to pasture, though they should still have a daily feed of grain, and return to their sheds in stormy weather. In the more northern sections of our country, and with the coarser wooled sheep, it may be advisable to provide for earlier lambs—as early as March or the last of February—as the season is too short to prepare them for market, or to allow them time for growth sufficient to endure well the second winter, when coming after grass.

We believe it is a settled fact that sheep do best in well ventilated barns, or half-open sheds, and with the run of small yards in the mild or clear weather of winter. Provision must be made for feeding racks for hay and grain under shelter, as sheep have a great aversion to water-soaked grain or fodder. In fact, the dryer their food the better it suits them; they prefer to take their water separate, and it should be brought where they can have convenient access to it, if not at all times, yet as often as twice a day at least. When it is supplied in their yards, they will drink frequently, though but a small quantity at a time.

Our readers may remember statements of injury to sheep from feeding grain to ewes, especially in its effects upon the lambs—a great mortality prevailing among them at an early age. Indeed, every spring we see in the various farm papers, inquiries in regard to the subject from those who have suffered losses in this way. But an examination of the whole facts in many cases, shows that feeding grain is not the primary cause, but rather late and ill-judged feeding to previously ill-fed and low conditioned sheep. The flock were in quite indifferent order when they came to the yards in winter, and from want of attention to proper feeding and shelter, became still lower in flesh with the advance of the season. At last, the owner wakes up to the fact, and thinks he must do something to bring them on or he shall lose all his lambs and a part of his old sheep beside. So as late, perhaps, as the middle of February or first of March he begins to give grain, and, to have it "do some good," gives a pint of oats per day or more; at any rate, more than the sheep can bear in their low condition. A sudden increase in flesh is the consequence, accompanied with derangement of the animal system, which results in difficult labors at lambing, fever and loss of milk in the ewe, and the death of the lamb from want of suitable nourishment.

No such result would occur with sheep kept at all times in good condition. No matter what grain is fed, if given regularly, as needed, through the winter, no ill effect can follow. On the contrary, to get the best and healthiest lambs it is always advisable to keep up the condition of sheep, either by feeding plenty of good hay or sufficient grain and straw to effect that object. If hay is fed a part of the day and straw the remainder, some grain must be added to make up the deficiency. Roots may be used for this purpose with good economy in the milder weather of winter.

Another important point in wintering sheep, is to divide the flocks according to age and condition. Those which are less thrifty cannot thrive when kept with a large flock of hardy sheep which have good appetites, while the poorer animals are less inclined to eat and more particular in their selection of food. Put by themselves, they can be favored and induced to eat more freely so as to go forward rather than backward in condition. This point is never neglected by those successful in sheep management, always securing large fleeces, and seldom losing sheep or lambs by disease.

To close we may add another hint, and that not one of minor importance. To winter sheep successfully it must be done under the eye of the owner, or one equally interested, and they must give due attention to the daily wants of the flock. In mild, damp weather, sheep consume sparingly, compared with cold dry weather, and the supply needs to be proportioned to their wants or great waste will be made. If any sheep seems ailing, an immediate inquiry should be had as to the cause and a remedy provided. Only one with an interest in the flock will attend to all these things.

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☞ According to a recent visitor at Woodburn Farm, the estate of R. A. Alexander, Esq., in Woodford Co., Ky.,—his place and stock now include 3,400 acres of land, worth $100 per acre, 300 horses, 250 cattle, and 600 sheep. No estimate is given of the value of the live stock, but the Country Gentleman will probably be safe in the assertion that no equal number of animals of which the average value per head was so large, has ever been congregated on any one estate in this, if in any other country.

[For the Country Gentleman and Cultivator.]

DWARF BROOM CORN.

MESSRS. TUCKER & SON—I noticed in one of your contemporaries, an article commending pretty highly as a new thing under the sun, "Dwarf Broom Corn," and also an advertisement of seed at a pretty good price. I propose setting forth a few of the peculiarities of this variety, that your readers who may be unacquainted therewith, may form an opinion of its merits. It is no new thing in this region, nor is it by many very highly esteemed, although some prefer it to the old variety. It is short jointed, and is encased by the foot-stalks of the leaves from the bottom to the top, save where the seed ends of the brush stick out. It does not grow more than three feet in height, and will therefore admit of close planting. The brush is long and fine, and is very nearly of a thickness throughout. It needs no bending over to keep the brush straight, as the foot-stalks of the leaves keep the brush upright.

The brush being long, slim, and of a thickness, prevents that beautiful elasticity in a broom so pleasant to the sweeper. The stalk of the brush is much harder than in the old variety, and does not work so well in the manufacturing. There may be various opinions of these evils, but there can be but one about the trouble and labor of getting the leaf from the brush. It is impossible to tell where the upper joint is when cutting the brush from the stalk, and to be certain that you are not cutting it too too short, you are certain in getting it too long; that is, you cut below the joint, and then the trouble commences. The leaf sheath must be taken from the stalk of the brush, or it will not cure, but become mouldy, and you must pick it off a piece at a time. One of my neighbors actually picked his finger nails off last fall, and he did not plant the "dwarf" this season. L. J. T. *Lambertville, N. J.*

[For the Country Gentleman and Cultivator.]

How to Bleach Broom Corn.

Make a tight box of boards. Four feet wide, four feet high, and eight feet long, is a convenient size. The top board on the front side and three-fourths of the cover, should be on hinges for convenience of putting in and taking out brush. A false bottom of narrow boards should be put in, fifteen inches from the ground; the boards left three-fourths of an inch apart.

The brush, after being thoroughly wet by dipping in water, is placed on end, on the false bottom, and sufficiently loose for the smoke to find its way through. The brimstone is burned in the vacant space underneath the false bottom. It is usually introduced through a sliding door in the bottom front board. The part of the false bottom immediately over the brimstone, should be lined with sheet iron. Brimstone can be burned by sprinkling powdered stone on paper. About one-fourth of a pound to a bleach, is sufficient for a box of the size described.

Hatfield, Nov. 28, 1860. E. GRAVES.

[For the Country Gentleman and Cultivator.]

HOW I SAVED MY PLUMS.

In common with other plum tree owners, for a number of years past, I have failed to mature any fruit of this kind, until within the two last seasons. In the spring of 1859 I prepared the wash recommended by the New-York Observer, composed of whale oil soap, sulphur, lime and tobacco water. Within two days after making the application of this villainous compound, there came a shower, and according to directions I applied the wash again, making it only of the whale oil soap. Another rain occurring within a few days, I watched to see if the curculio would again attack the young fruit, and found them at it, detecting one in the very act. I again gave the young fruit a syringing with the soap suds, which stopped further aggression on the part of the little "Turk." The result was a heavy crop of fruit, even to the breaking of the limbs of my trees, while my neighbors, who had let their fruit take care of itself had none.

I might have added that in the spring of 1858, in experimenting with gas tar and coarse salt, I nearly killed a fine tree, it losing all its leaves.

This last season, having satisfied myself the year previous that the tobacco and sulphur might with safety be omitted, and finding that the curculio had commenced their operations, I again prepared my solution of soap and water, and also of lime water. In pouring the lime water off the lime, I carelessly let some of the lime run out, so that the foliage and fruit after the application had rather a whitewashed appearance. This was the only application needed or given. The curculio did not again molest my plums, although they attacked my pears and grapes. Now why the one application was sufficient, although we had frequent rains, I cannot state, unless the whitewash held the soap on the fruit. Be that as it may, I know that I had a fine crop of plums. L. J. T. *Lambertville, N. J.*

[For the Country Gentleman and Cultivator.]

How to Grow Cauliflowers and Cape Broccoli.

MESSRS. L. TUCKER & SON—I send you my experience in growing cauliflowers, broccoli and cabbage, which may be of use to some of the readers of the Co. GENT.

Many farmers say they cannot grow cauliflowers and Cape Broccoli. I will give you my way, as I have not failed to grow a good crop for twenty years on a sandy, gravelly soil, giving them the same cultivation that I do my cabbage. About the first of May I sow the large English cauliflower seed in the bed previously prepared, together with my broccoli and cabbage. When the plants are about three or four inches high I transplant out into my grounds prepared for broccoli and cabbage. In setting I water immediately with liquid guano, or in case I have no guano I take about half a bushel of hen manure and put it in a barrel and fill up with soap suds after washing, and dish slops, giving each plant about half a pint each. I stir the earth around the plants at least once a week, giving each about one gill of the liquid as prepared. As soon as the cauliflowers and broccoli begin to show heads I draw the leaves from the opposite sides of the plant, crossing and tucking one over the other so as to make them fast. This covers the heads from the hot sun, and blanches them so that they are much more delicate and tender than when left to grow natural. I had them the present season early in August weighing from six to nine pounds when divested of the leaves. By the bye I get my seed from either of the Messrs. Thorburns at Albany, or at No. 15 John-st., New-York, of J. M. Thorburn & Co., as I consider theirs the most reliable, true to their kind, and have never failed to germinate. G. TROWBRIDGE. *Camden, N. Y.*

[For the Country Gentleman and Cultivator.]

Todd's Young Farmer's Manual.

MESSRS. TUCKERS—I have at last given the "Young Farmer's Manual," by S. EDWARDS TODD, a pretty thorough perusal, and I think it the best book for the young farmer I have met with, and am satisfied thousands could learn enough from it to be worth far more than the price of hundreds of the books. Could I have obtained such a book forty years ago, and taken the advice contained in it, it would have been worth a great deal to me. I think we have nothing like it in all the agricultural libraries that I have seen. It treats of the mechanical part of farming, and it ought to be in the hands of every farmer. Farmers should put it in the hands of their sons and hired men, that they may learn to put edge tools in order, and to handle them with skill. There is a short chapter in it on Draining, which is practical, and of great value to farmers commencing draining. Every farmer ought to have a copy of the Young Farmer's Manual—the oldest can learn something from it. JOHN JOHNSTON. *Near Geneva, N. Y.*

LARGE LITTER.—You gave an account, some time ago, of a valuable sow. I have a sow that brought her second litter about 5 weeks ago. I sold 12 fine pigs, four weeks old, and have three good ones and one runt left. Sixteen pigs in all. I think that is doing pretty well. H. C. D.

THE CULTIVATOR.

ALBANY, N. Y., JANUARY, 1861.

☞ The "Lectures on Agricultural Chemistry" delivered in December last before the Smithsonian Institution at Washington, by Prof S. W. Johnson of Yale College, have been published in pamphlet form. Bringing much sound common sense to the task of elucidating scientific truths, Prof. J. is known by those familiar with his previous writings, for a style precise in language and clear in illustration, while he is eminently cautions in limiting, or generalizing, as the case may be, the conclusions to which he arrives.

"The great practical lessons," he remarks for instance, with regard to the use of manures, as "taught by experience and confirmed by science, are, *save all refuse which contains any of the elements of vegetation; apply abundantly the mixed ingredients of the dung and compost heaps.* As concerns commercial and saline manures, such as guano, salt, plaster, lime, &c., *experiment with them repeatedly and accurately on the small scale, so as to learn what the crops say about their value.* Where phosphates have been heavily applied, it is probable that ammonia or nitrogenous manures, or perhaps lime or potash, may next exert the most beneficial action, and *vice versa.* Be sure of *enough*, not only as regards the quantities, but also the kinds of matters applied. * * * The recent progress of knowledge, thanks to the scientific farmers and agricultural philosophers of England, Germany, and France, demands a series of chapters on manures that are as yet unwritten, but, when rightly produced, will be alike novel, interesting, and useful to the true American farmer, who cultivates with equal assiduity the 'soil and the mind.'"

We trust that Prof. Johnson himself will give to the world ere long, the results of his own labors in this field. The want he has perceived is one which he is peculiarly qualified to supply.

◆

☞ The Editor of the American Short-Horn Herd Book, Lewis F. Allen, Esq., of Black Rock, has issued the Prospectus of his Fifth Volume—designing it to appear at the expiration of about two years from the publication of the Fourth, in May, 1859.

"Our American cattle herds," remarked Mr. A. in the preface to his last volume, "are as firmly fixed an element of agricultural production and wealth here, as are those of the English, Scotch or Irish farmers, and it will be our own fault only if we suffer such an important branch of our domestic industry to deteriorate or fail."

This is a statement which is just as true now as when it was written, and of probably still wider application. We quote it—although not referred to in any way in Mr. Allen's Prospectus, because, as our breeders begin to approach more nearly the English standard, and consequently to import less from Great Britain,—the agricultural public, no longer or far less frequently called upon to stare over immense prices for new-comers, may carelessly fall into the opinion that therefore "Short-Horns have had their day,"—and some breeders of them consequently become negligent in registering their pedigrees.

On the contrary, we can but think the evidences of the value to the country of our improved herds, never more numerous than they are at the present moment, and the fact of fewer importations is far less owing to any lack of interest in farther advancement, than because as just intimated, we have reached a point where we can afford to direct our attention to breeding at home, instead of to purchases abroad. The Fourth Volume of the American Herd Book, with its nearly three thousand pedigrees, will probably now be followed by as many more, of animals almost wholly bred upon our own soil; and while it is scarcely necessary to warn our breeders generally of the importance of placing the pedigrees of their stock on record, beyond the reach of loss or error, we may take the opportunity now afforded to suggest to farmers that with the wider diffusion of better blood among us, there will every day be less and less excuse for those who fail to contribute their share toward rendering each generation of the live stock of the country more valuable than the one which preceded it.

◆

$5,000 Spent in Draining a Farm.—T. C. Maxwell & Brother of Geneva, to whom were awarded the first premium of the State Ag. Society in 1849, have laid over fifty miles of drain tile at an aggregate cost of $5,000. Their farm is a gravel and clay loam, in some parts hard clay subsoil; and the work has been principally done by hand. In the last 30 acres, on which this premium was awarded, the cost of digging was reduced from 34 to 30 cents, by using a common plow for opening the drains at first, and afterward a subsoil plow to loosen the earth. In regard to the amount invested in this improvement they say in their statement: "$5,000 would seem to be a very large expenditure—but our lands are greatly improved in tilth and friability, and our crops are increased both in quality and quantity; hence we are thus far well satisfied with the investment." So is every one who drains heavy soils with proper thoroughness and judgment.

◆

Prices of Farm Products in China.—The London Gardener's Chronicle furnishes us the tariff of prices paid for the supplies furnished the allied armies of England and France by the Chinese contractors. We have changed the currency from the English into our dollars and cents. It says: "Bullocks are divided into three classes. The first weigh about 500 lbs., and cost $25 per head; the second, weighing about 400 lbs., are fixed at $20; the third, about 300 lbs., are $15 each. Sheep of all sizes cost $3 per head. Beef and mutton are also sold by retail, the first at 6 cents, the second at 8 cents per pound. Tea is 29c., sugar 8c., and flour 5c. per lb. Onions, turnips, and pumpkins, 5 lbs. for 1 cent; fowls 18c., and ducks 41c. each. The finest grapes may be had in abundance at 6c. per lb.; the largest peaches at 2c. each. Watermelons—most refreshing of fruits and large enough for a dozen,—cost 10c. each. Ice in large blocks of 25 lbs., pure and clear as the finest Wenham Lake, is sold for 12c. a block. There is any quantity of forage of every description—hay, millet stalk, green grass, paddy, peas, beans, and Indian corn. Coal costs 1c. and charcoal 2c. a pound. Coolies receive 24c. per day per man. Supplies of every description are abundant and excellent. The mutton is fat and well flavored, and no finer grapes or peaches are grown than those which now come to Tien-tsin market. A favorite fruit with the Chinaman is the classic Lotos, in shape like a small melon; [what can this be?] it is full of stoneless kernels, sweet and pleasant to the palate. Often and often have I eaten them without experiencing the dreamy sensations they are said to produce.

◆

Matching Horses.—S. K. Stow, in a report on horses, in the last State Transactions, suggests that in matching horses it is far more important to select those of like qualities in gait, speed, and action, than to make looks the criterion. He says: "A man explores the country for a hundred miles in circuit in search of a horse to match one he already owns, and imagines he has got a good match when he has found one merely of like size and color. No such thing; he has only spoiled both. If dissimilar in the qualities which constitute a match, by uniting them together in service, he diminishes instead of increasing their value, since each will be forced into the vices of the other." This fact is too often disregarded.

◆

☞ We noticed a number of weeks ago the Hereford purchases lately made at English sales on account of Fred. Wm. Stone, Esq, of Guelph, C. W. The Mark Lane Express mentions their departure for their Canadian destination as follows:—"On the 24th the steamer Anglo-Saxon sailed from Liverpool with one of the largest and most choice selection of these animals we have ever known leave our shores at one time. They were purchased at the recent sale of Lord Bateman's herd by Mr. J. J. Stone of London, for his brother, Mr. F. W. Stone of Moreton Lodge, Guelph, Canada West, who has long been a very successful breeder of Short-Horn cattle and Cotswold sheep; but now having added another farm to his estate, he is about to commence breeding Herefords."

The Yale Agricultural Lecture Course for February, 1861—as already announced in our columns—will be similar to that conducted during the corresponding month the past year: and we may repeat now, what we have said before, that it is difficult to imagine how any young farmer can spend a month to better advantage—or, at least, in the midst of greater opportunities for adding to his stock of information—than at New-Haven for the four weeks included in the prosposed programme. The Lecture fees are but a trifle, and the personal expenses during that time need not be extravagant; while the opportunities afforded for mutual discussion, aside from the Lectures themselves, constitute a most attractive and useful feature.

Full programmes of the course will soon be issued. At present it is sufficient to mention that the following gentleman have agreed to be present and take part in the proceedings of the month:—Messrs. Wilder, Grant, Barry and Parsons on Pomology and kindred subjects; Quincy, Bartlett, French and Tucker on Farm Crops, Manures, &c.; Silliman, Johnson, Eaton and Dadd on Science; Morris, Howard and Dickinson, on Domestic Animals. Moreover, during the last week a course of four lectures will be given on the subjugation and education of the horse, accompanied with demonstrations upon the living animal. The Course commences Feb. 5th, and continues through the month. Programmes containing full particulars may be obtained on application to Prof. John A. Porter, New-Haven, Ct.

☞ At the annual meeting of the Susquehanna Valley Agricultural Society, held Dec. 8th at Unadilla, the following persons were elected officers for the ensuing year:

President—Ira E. Sherman, Sidney.
Vice-Presidents—Lewis S. Peck, J. J. Rogers, Unadilla; George S. Bidwell, Ralph Dewey, Sidney.
Treasurer—Clark J. Hayes, Unadilla.
Secretary—Robert W. Courtney, Sidney.
Directors—William J. Hughston, Sidney; Samuel Chaffin, Unadilla. S. G. Cone, John Hough, Abner Johnston, and W. T. Hodges, hold over.

Note from the Secretary.—Messrs. Tucker & Son: As you like to "make a note of" preminm crops, I have one that you may "put upon record" as the best reported in the Susquehanna Valley, and excelled by few in any other valley of our State. Mr. Abner Johnston of Sidney Plains, raised 81½ weighed bushels of winter wheat on two acres of land, the past season. The land was free from trees or stumps. Summer fallowed in the summer of 1859, by plowing early and turning under with the sod a heavy coat of barn-yard manure and thoroughly mixing, and sowing the last of August. R. W. C.

☞ To the Dairy of our friend Mr. C. S. Mack of Lockport, we are indebted for an extraordinarily nice new Sage Cheese,—although so new, very rich, and manifesting such evident skill in the manufacture as to meet with high commendation from all who have tasted it. To the orchard of Mr. Jurian Winne of Bethlehem, for an assorted barrel of fine Apples, including handsome specimens of several favorite varieties; and to the kindness of the same gentleman, for a noble Wild Turkey received by him from friends in Canada, and of the merits of which we shall be able to speak still more understandingly after our Christmas Dinner for 1860 shall have been numbered among the events of the past.

☞ C. S. Wainwright, Esq., of Duchess Co., so widely known as one of our leading breeders of Devon cattle, having a heifer which would not breed, has been feeding her for beef for some time past. She is particularly referred to in John Johnston's letter in another column where his opinion of her merits will be found expressed at some length. We learn through the columns of the N. Y. Tribune that she has just been sold for the price referred to by Mr. J. ($150,) to a New-York butcher, who seems to be very fortunate in picking up nice beef, as he has also just purchased 27 four year old fat grade Short-Horn Steers averaging about 1,750 lbs. each, from our friend James O. Sheldon, Esq., White Springs Farm, Geneva, likewise intended for Holiday consumption by city epicures. We should like to have bespoken a joint from each lot, in order to test in a private way on the French system the comparative merits of the two breeds in the quality of the beef they produce.

The Canada Bushel.—By an act of Parliament the weight of a standard bushel of the different kinds of grain, seed, roots, &c., in Canada is fixed as follows:

Wheat,	Sixty pounds.
Indian Corn,	Fifty-six pounds.
Rye,	Fifty-six pounds.
Peas,	Sixty pounds.
Barley,	Forty-eight pounds.
Oats,	Thirty-four pounds.
Beans,	Sixty pounds.
Clover seed,	Sixty pounds.
Timothy seed,	Forty-eight pounds.
Buckwheat,	Forty-eight pounds.
Potatoes, Turnips, Carrots, Parsnips, Beets and Onions,	Sixty pounds.
Flax seed,	Fifty pounds.
Hemp seed,	Forty-four pounds.
Blue-grass seed,	Fourteen pounds.
Castor beans,	Forty pounds.
Salt,	Fifty-six pounds.
Dried Apples,	Twenty-two pounds.
Dried Peaches,	Thirty-three pounds.
Malt,	Thirty-six pouuds.

The Queens Co. Ag. Society—Premium Crops.—The Annual Meeting of the Queens County Ag. Society was held last week Monday at the Court House, Hempstead. We are indebted to Mr. Secretary Harold for an account of the proceedings. The following Premium Crops are worth "making a note of." Avoiding minute fractions, 167 weighed bushels winter wheat were produced upon 4 1-5th acres of land, by John Conn, farmer to A. McDonald, Esq., Flushing, eight large fruit trees standing in the lot and lessening the crop materially. The premium crop of potatoes, (Mercers,) was at the rate of 358 bushels per acre, taken by Geo. R. Underhill, Oyster Bay. The best crop of Onions, a fraction over an acre, yielding about at the rate of 1,000 bushels per acre, was grown by Daniel Smith of Oyster Bay. One or two garden crops we reserve for a future note. The following officers were elected for the ensuing year:—

President—Daniel K. Youngs, Oyster Bay.
Vice President—Robert Willetts, Flushing.
Secretary and Treasurer—John Harold, Hempstead.
Directors—for three years—R. E. Thorne and Rich'd McCormick.

☞ List of Members of the Ohio State Board of Agriculture as just chosen for 1861:

President—Darwin E. Gardner,* Toledo, Lucas Co.
Rec. Secretary—Wm. Dewitt,* Cleveland,
Treasurer—C. W. Potwin,* Zanesville.
N. S. Townshend, Avon, Lorain Co.
T. C. Jones, Delaware, Delaware Co.
Henry B. Perkins, Warren, Trumbull Co.
James M. Trimble, Hillsboro, Highland Co.
David Taylor,† Columbus.
John Reber, Lancaster, Fairfield Co.
John M. Milliken,* Hamilton, Butler Co.
Cor. Secretary—John H. Klippart,* Columbus, Ohio.

The election of members and officers took place Dec. 6—those marked * were re-elected, the one marked † is a new member, the others hold over until Dec., 1861.

Thorough-Bred Stock for Mississippi.—Hon. J. Alex. Ventress of Woodville, Wilkinson Co., Miss., has recently purchased from P. B. Tyler, Esq., Springfield, Mass., the thorough-bred Devon bull "Albert 3d," and a thorough-bred African buck. Also, from D. B. Logan, Esq., Morristown, N. J., three thorough-bred Tartar sheep (one buck and two ewes.) This stock has been shipped to his plantation in Mississippi.

Alsike Clover.—In answer to several inquirers, and as will be noticed from his advertisements in another column, R. L. Allen, 189 & 191 Water St., New-York, has Alsike Clover seed for sale, as well as a large and valuable assortment of Seeds and Implements for the Farm or Garden.

[For the Country Gentleman and Cultivator.]

WINTER CARE OF COLTS.

Eds. Co. Gent.—In your issue for Dec. 6th, H. C. D. inquires how to winter his colts. Not claiming to be "one of the best horse raisers," perhaps you will think it presuming on my part to give my experience on the subject; but perhaps it may be of some benefit to some one; in the meantime I hope that this will not prevent others from giving their experience, for which I shall look with a good degree of interest.

For two colts I would prefer a building 24 feet square, with an earth floor; then put 6 inches or more of spent tan or sawdust on for absorbing the urine; fit a feeding box on one side, and with a small yard attached, you have a fine place for them.

Then for feed give fine hay if early cut, or if of second growth, all the better; and, if possible, for grain I would advise H. C. D. to get some oil cake meal and wheat bran, or shipstuffs, or shorts, as some call them; and give them a pint or quart of oil cake meal, and from 2 to 4 quarts of bran mixed to each per day, and your colts will be as playful as kittens, and in fine order next spring. If the above cannot be had, give 2 quarts of sweet apples, or sweet and sour mixed if you have them, and one or two quarts of oats each per day, and I think you will have fine colts.

If H. C. D. cannot give as much room as mentioned above, 12 feet square will do. It may be necessary to have separate feeding boxes, and to tie your colts up when feeding grain. If you do not get better advice, please try the above and report progress. Your stable may be roughly made of boards, and covered with poles and straw if no better can be had. Jonathan Talcott. *Rome, Dec. 7.*

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ORNAMENTAL HEDGES, 1 illustration.
SULPHER FOR MILDEW ON THE GRAPE, 3 illustrations.
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Among other valuable chapters, the Annual Register for 1861 will contain the following:—

I. WORKING MEN'S COTTAGES—Seventeen Engravings.
  1. Important Advantages of their Erection.
  2. Design for a Cottage of the Smallest Size.
  3. Design for a Cottage on a somewhat Larger Scale.
  4. Design for a Cottage of better class or for a small Farm House.
  5. Design for a somewhat more costly Cottage.
  6. A Design by L. B. Valk.
  7. A Design by J. M. Wade, with modifications
II. LAYING OUT GROUNDS—Five Engravings.
  1. Plan of a Village Half Acre Garden.
  2. Simple but Graceful Arrangement of Pleasure Grounds.
  3. Laying out a Western Farm.
III. PRUNING AND TRAINING ROSES—Eleven Engravings.
  1. Tree Roses; two modes with figures.
  2. Weeping Roses.
  3. Pillar Roses.
IV. NEW FRUITS AND POMOLOGICAL NOTICES—Twenty-one Engravings.
  1. Basket of Plums—Descriptions and Figures of 15 newer Sorts.
  2. Notes on Strawberries—Results of the Farther Experience of the Year.
  3. Pruning Dwarf Pears.
  4. Accurate Portrait of a Dwarf Pear Tree in Bearing.
  5. How to Obtain Fruit in New Places.
V. STRUCTURES FOR GREEN HOUSE PLANTS—Ten Engravings.
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  2. The Conservative Pit.
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VI DOMESTIC POULTRY—Thirty-three Engravings.
  1. Origin of Domestic Fowls.
  2. Descriptions at Length of the Different Breeds.
  3. Management of Poultry.
  4. Five Designs for Poultry Houses.
  5. Nests, Pens, Coops, Feeding Hoppers, &c.
  6. Diseases of Poultry.
VII. WEEDS AND THEIR DESTRUCTION—Twenty-one Engravings.
  1. General Rules for their Prevention and Extirpation.
  2. Annual and Biennial Weeds.
  3. Simple Perennial Weeds.
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  5. Noxious and Intruding Shrubs.
VIII. FILTERS, AND FILTERING CISTERNS—Five Engravings
  1. Construction of Portable Filters.
  2. Another Plan for the Same.
  3. Filters attached to the Cistern.
IX. AGRICULTURAL NOTES.
X. HORTICULTURAL NOTES.
XI. RURAL MISCELLANY.
XII. DOMESTIC ECONOMY, &c., &c.
XIII. ADVERTISEMENTS

This, preceeded by the usual Calendar pages and Astronomical Calculations, forms a book which is certainly cheap at its retail price, while the Publishers may especially call attention to the pithy and appropriate HINTS FOR THE MONTH which appear upon the Calendar pages, as embracing in the most concise form many valuable suggestions—to the article on WORKING MEN'S COTTAGES, for the neat and useful Designs it contains—to those upon ROSES and GREEN HOUSE Structures for their beautiful illustrations—to that upon POULTRY as the most complete chapter upon the subject yet presented in equal space, accompanied as it is by so many Engravings—and to that upon WEEDS and their Destruction, as presenting just the information which every Farmer requires, with cuts by which he can compare the most common and troublesome of these intruders, and appropriate practical directions how to get rid of them.

THE PUBLISHERS, with the view of rendering the circulation of the Annual Register for 1861, still wider and larger than that of any previous Number, are prepared, as above intimated, to offer the most liberal Terms for its introduction in quantities, either to Agents, Agricultural Societies, Nurserymen, Dealers in Implements and Seeds, or any others who take an interest in the dissemination of useful reading, and in the promotion of Rural Improvement.

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Terms and Premiums for Cultivator Subscriptions for 1861.

It is the extreme cheapness of this Journal, in proportion merely to the amount of matter it contains, to which we call attention, because in this respect, aside from the extent of its Correspondence and the number of its Illustrations, it has no rival we believe in our periodical literature, and because—such being the facts of the case with regard to THE CULTIVATOR alone,—their force is greatly increased when each Club subscriber is also presented with a copy of the ANNUAL REGISTER with its additional stores of information and engravings. When $5 is sent for 10 copies of the CULTIVATOR and REGISTER—each FIFTY CENTS pays for a total of over FIVE HUNDRED PAGES, embellished with nearly THREE HUNDRED instructive as well as ornamental illustrations!

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VOL. IX. ALBANY, N. Y., FEBRUARY, 1861. No. 2.

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Editorial Notes Abroad.

◆

No. XXXVII---Farming in East Lothian.

In writing out, several months ago, my Notes upon the Agriculture of the County of Norfolk, in England, I took the opportunity to present a little sketch of the production of its whole area, based upon statistical computations, and affording, as it seemed to me, the most striking evidence of the degree of excellence its Farming has attained. In consulting the memoranda of the Journey, to ascertain what gaps still remain unfilled in these records of its history, there is one district, rivalling Norfolk in its agricultural superiority so closely, that each has sometimes claimed to surpass the other, which appears to have scarcely had as yet that attention from us which its prominence so clearly demands. I allude to the county formerly known under the name which appears in our title, but now more correctly designated as Haddingtonshire, in Scotland—a county where we shall be aided in taking a general agricultural survey by the carefully collected statistics obtained under the supervision of the Highland and Agricultural Society, which in point of accuracy and in the character of those who collected them, deserve a measure of confidence and weight that cannot always be accorded even to governmental returns.

I need only mention, for instance, that GEORGE HOPE, Esq., of Fenton Barns—to whom I had been favored with an introductory letter by the politeness of Mr. COBDEN, and with regard to whose extensive farming operations I shall soon have some details to offer—was the enumerator of these statistics in his district, to show into how good hands the task was committed; and it is to Mr. HOPE himself that I am indebted for the following facts, as noted down in conversation, or as included in the Statistical Report he gave me, for the season of 1856, and published in December of that year for the Board of Trade.

East Lothian, then, or Haddingtonshire, contains 457 occupants who pay an annual rent of $50 (£10) or over, upon 100,435 acres of arable land subject to rotation of crops; in other words, their holdings average 220 acres each, nearly or almost three times the average size of farms for the whole surface of Scotland, as the aggregate returns of all its 32 shires show a fraction less than 83 acres only, to each holding. These farms are cultivated by or support,

Horses for Agricultural Purposes above three years old,	3,353
do. do. do. under three years old,	570
All other Horses,	749
Total,	4,672

Which is not quite equal to four "agricultural horses," young and old, for each hundred acres of tilled land. As regards other stock, there were—

Milk cows,	2,086	Sheep for Breeding,	29,347
Other cattle,	6,399	Sheep for Feeding,	32,324
Calves,	1,437	Lambs,	32,453
Total cattle,	9,922	Total Sheep,	94,124

And, adding 4,923 Swine, an aggregate of all live stock, 113,641 head.

This is equivalent to about 94 sheep, and nearly ten cattle and five pigs, all ages included, to each 100 acres,—a result not very different from that obtained in examining the agriculture of Norfolk. (Co. GENT. March 22, 1860.)

Directing his attention to this amount of live stock, where the great object of his pursuit is the *production of grain*, the farmer in East Lothian, for each hundred acres of his holding, had—avoiding minute fractions—

In Wheat,		19 acres.
In Barley,		10 do.
In Oats,		16 do.
Vetches, turnip-seed, rye, &c.,		1 do.
Total under white crops,		46 acres.
In Beans and Peas,	4⅓ acre	
In Turnips,	16⅓ do.	
In Potatoes,	6 do.	
Summer fallow and other roots,	1⅓ do.	
Total under green crops,		28 acres.
Add Grass and Hay under rotation,		26 do.
Total,		100 acres.

And obtained in 1856, when crops generally were no better, indeed perhaps scarcely as good as usual—average returns as follows:

Wheat, 28 bushels 0¾ pecks per acre.
Barley, 39 bushels 3½ pecks per acre.
Oats, 43 bushels 1¾ pecks per acre.
Beans and Peas, 28 bushels 2¼ pecks per acre.
And of turnips, 14 tons 12¾ cwt. per acre.

In speaking, however, of the agriculture of East Lothian, it should be borne in mind that the rougher and less favorable farming lands in the southern part, must operate to lower the average results of the whole county very materially. Thus in Mr. Hope's immediate district, comprising Aberlady, Athelstaneford, Dirleton, and North Berwick, the average wheat crop was 31 bushels 3 pecks per acre; barley 44 bushels 2 pecks; oats 52 bushels 1½ pecks in 1856, and 57 bushels in 1855, and the average turnip crop was 19 tons per acre. But taking the whole county just as it stands, what an immense aggregate production we have for not very much more than a hundred thousand acres of arable land—a production which Mr. Secretary Maxwell computes as follows:

Wheat,	541,933	bushels.
Barley,	404,642	do.
Oats,	680,199	do.
Beans and Peas,	125,775	do.
Turnips,	239,740	tons.

Or to take a broader surface still, and include the whole 32 counties of Scotland, "Highland and Lowland, far and near," and place the Agricultural Statistics there collected in 1856, side by side with those obtained for the State of New-York in 1855, and we have the startling result that New-York, with thirteen million and a half acres, (13,657,490) of improved land, against only *three millions and a half* (3,545,191) in Scotland, produces but nine millions bushels of wheat, both spring and winter, (9,092,400,) against her seven millions of bushels (7,270,952;) but 27 milions (27,015,296) bushels of oats against her 32 millions (31,966,381;) but three and a half millions bushels of barley (3,563,540,) against her five millions and a half (5,581,970;) while, possessing as she does nearly four times the "improved" agricultural area of Scotland, she has not much more than twice the number of cattle (2,105,465 against 967,047,) and only about three-fifths as many sheep (3,217,024 against 5,816,560.) Indeed, the total live stock of New-York State, with her 13 millions of acres of improved land, including horses, cattle, swine and sheep, numbers 6,971,996 head, against an aggregate of 7,090,384 head on the 3½ millions acres of Scotland. As to the *total areas* of Scotland and the State of New-York, respectively, the former has about 20,000,000 acres and the latter 26,758,000—not one-fourth of Scotland being capable of cultivation, although many of her wild lands must be devoted to sheep, while nearly one-half of New-York is already rated as "improved." But the above figures as regards the crops and stock of the two countries, appear to indicate a difference of opinion, or at least of *practice*, as regards what constitutes agricultural "improvement."

The object, therefore, of presenting such figures as these, is first and chiefly because a contrast so marked can scarcely fail to lead any intelligent American Cultivator to ask himself why such differences should exist, and whether there is not room for enlarged production on his part? Admitting as we must, most freely, that because the farmers of Great Britain can and do excel us so far in the amount of stock they fatten and crops they raise,—does not prove absolutely, either that we can equal them, or that it "would pay" our farmers to attempt it,—there is still one point which cannot be overlooked:—Ought we not, in justice to ourselves, to carry out such improvements as have been proved in our own American practice, to be paying ones? or, if we insist upon adhering to our old ways—if such statements as to what other countries, in other ways, can be made to produce, are at once to be thrown aside as the unnatural growth of an old and over-populous territory—let us at least keep such Farm Accounts as shall enable us to hold up *our* figures to other nations, and tell them in turn—in vindication of Yankee sagacity and good sense—"We *are* farming, now, so as to make the most money we can in our present circumstances."

It is, indeed, very certain that the general production of our country, or of any one State, can only be enlarged by better *individual* practice, and no less certain that it is the question of pecuniary return, rightly considered, which decides whether one kind of practice is, or is not, *better* than any other. And regarding it, as we do, the great end of all Agricultural reading (and writing) to lead the reader to *think for himself*,—it is our aim to present those facts which seem most likely to promote this end; of all such facts there are, perhaps, none better calculated to arrest attention and awaken thought, than those afforded by trustworthy statistics, fairly stated and interpreted.

— Having thus glanced, very briefly, at the general results accomplished in the Agriculture of East Lothian, let me now proceed to give, as an instance of the operations going on upon a single farm, some details of the practice at Fenton Barns,—affording as this farm probably does, as excellent an example of *good farming for practical purposes*, as any other, either in its own district, or, so far as my own observation extends, in the whole United Kingdom. I visited Mr. Hope in one of the busiest seasons of the year for any farmer,—just as harvest was beginning to require the utmost attention, (August 8, 9, 1859) and can only regret, on this occasion as on several others, that my report must do so little justice to the time he so kindly devoted to answering my questions and showing me all that I most desired to see, both at Fenton Barns and in a drive to his distant Dirleton farm.

If I am not mistaken, Mr. Hope prefers the following rotation, which is as will be seen, a seven-year course: 1, grass; 2, oats; 3, beans; 4, wheat; 5, turnips; 6, potatoes, and, 7, wheat. The following was the disposition partially, of the 670 acres or thereabouts, which he cultivates:—

Wheat,	135	acres.	Turnips,	105	acres.
Barley,	20	"	Potatoes,	83	"
Oats,	100	"	Mangolds,	11	"
Turnip Seed,	4	"	Cabbage,	5	"
Beans,	57	"	Grass land,	125	"

About 90 acres of the grass land was pasturage—the remainder mown for hay. The bean and turnip lands receive all the manure that is made on the farm, while the turnips and potatoes, and sometimes the grass, have also a dressing of guano or superphosphate. The mixture of "seeds" preferred, is about 14 lbs. of red clover, 4 of white clover, 2 of yellow, or trefoil, and 2 of alsike clover to half-a-bushel of rye grass. He began tile draining here about 1833 or '34, continuing the process from time to time for eight years—first every fourth furrow, (the "furrows" are 18 feet apart;) then every second furrow, and finally putting down a drain under every furrow, that is every 18 feet—generally at a depth of two and a half feet, sometimes however carrying down every fourth line of drain to a greater depth than this, say three and a half or four feet. The cost of the process had aggregated about £2,500 (say $12,500.)

I understood that Mr. Hope's grandfather first occupied the Fenton Barns farm in 1772, since which it has remained in the cultivation of the same family. A part remained in open moor for many years later than the above date, and it was not until 1836, if my notes are not at fault, that Mr. Hope first tried some experiments in the reclamation of the yellow sands then thought worthless, by applying bones, growing a crop of turnips, and feeding them off to sheep on the ground, with liberal supplies of linseed cake—the experiment proving almost unexpectedly successful, for the sheep, having been bought well and sold well, returned him not only the cost of the oil-cake but also about £10 per acre for his turnip crop.

The character of the soil varies considerably—including stiff or clayey loam, light loam or sandy upper soil, mostly resting upon a subsoil of compact clay. The object of the draining above referred to, was to get rid of the surface water—the land had been drained in the days of the father of the present Mr. Hope, to cut off springs, with stone, very thoroughly and at great expense.

There are generally about a hundred head of cattle kept during the winter season—perhaps remaining on the place altogether six or seven months. Two-year olds are bought for feeding at from £12 to £15—selling when fattened for from £20 to £25—sometimes perhaps for £10 per head above the first cost, but if £8 is averaged it is doing pretty well. The great point in feeding cattle, as I understood Mr. Hope's experience, was to adjust properly the kind and quantity of the food to the condition of the animal; not giving too strong food, for example, at first—beginning say with a few turnips, proceeding afterward to more turnips with some potatoes, and, at a later day, to bean or other meal with chaff, and concluding with five or six weeks of oil meal. Sometimes indeed oil meal is fed for the last two months—at first at the rate of about three pounds per head per day, and increasing by degrees to five pounds per head, and in here and there a case perhaps to six. The turnips are continued while the cake is fed, also from three to five pounds per head of some kind of meal. Mr. H. likes to grow mangolds enough, as they keep better than turnips, to last after the latter begin to go, until there is a bite of grass ready. He seemed to think that oil cake was all-important, not so much for the flesh it makes itself, as to give an outside finish to the flesh put on already by other feed, and he gave this rule as comprising the true economy of feeding—*To make each month's food successively richer than the one before it.* And this as to farming—"Manure, manure, manure, and you may farm as you like," said he; "but the great problem also is *to keep the land clean as cheaply as possible.*" Two green crops in succession he thought the best way to accomplish this.

What are known and often mentioned as "fiar's prices," are annually taken in Scotland in this way: during the last week in February and first three weeks in March, each sheriff summons perhaps a third of the farmers to send in schedules of all their sales of wheat, barley and oats, sold within the county for cash since the preceding harvest—the average of these sales for each kind of grain, constitutes the "fiar's price" for the year, and may be legally paid, if I am not mistaken, in commutation, where rents or other charges were originally made payable in grain. Few Scotch estates, I believe, are free from some slight charge of this sort; it being the theory that all lands are held primarily of the government or the king, and this payment being merely a kind of formal, or perhaps feudal, acknowledgment of original proprietorship or present superiority—here and there, on a "freehold" estate, having been bought off, it may be, by some one payment, or donated in return for service to the crown. Nisbet Hamilton, a large proprietor in East Lothian, and I believe Mr. Hope's Landlord, with an annual income from the land he there owns, rated at about £30,000, might have, for example, to pay £20 a year to the crown, and as this kind of payment has been long made in money rather than in produce, the "fiar's prices" extend back for many years, and afford an interesting way of comparing present prices with those of periods gone by.

Mr. Hope is a Director of the "United East Lothian Agricultural Society," to quote its title at length—a body answering very nearly to one of our county Societies. He presented me with a copy of its Report for the preceding year, and a few facts with regard to its system of operations I am sure will be read with interest—the more particularly as they bring to light one incidental, but, as it seems to me, very important advantage in the institution of *Market Days*, which have of late begun to attract considerable attention here—namely, that by bringing the farmers of a county, or even of a less extensive district, together once a month, or more or less frequently, for the transaction of business, these Market Days put within the reach of Agricultural Societies and farmers, some means of improvement otherwise much less accessible.

For instance, the East Lothian Agricultural Society takes advantage of these periodical gatherings for the purpose of holding several shows in the course of the season, which must contribute most effectively to the usefulness of such an association, but which of themselves would hardly be likely to attract attendance from a distance, or where coming entailed any expense, without the additional attraction of market-day business. For instance, the 5th of March, a meeting was held at which prizes of $10 each were offered respectively for seed grains, as follows: spring wheat, the Chevalier barley, any other approved variety of barley—the potato, late Angus, Hopetown, and any other improved variety of oats—best beans, and lastly, for the best assortment of grass seeds, comprising eight bushels each of "red and white clover, annual, perennial, and Italian rye grass." The quantity of seed grains required for competition is ten quarters or eighty bushels. A second show was held the 12th of March, when prizes were offered for fat and breeding stock, including bulls, (Short-Horns,) stallions and swine—a prize of no less than £50 ($250) being offered for the best draught stallion, with the condition, undoubtedly, that he should remain for service in the county. By varying such prizes as this, as occasion may demand from year to year, it will be easily understood how a Society may become the engine of accomplishing great good. The exhibition was held at Salton, away from the market town, July 6th, and there prizes were offered for brood mares for draught and for the road, for entire colts, geldings and fillies, for cows and heifers (Short-Horn) and several classes of Leicester and South-Down sheep.

Two more exhibitions conclude the list—one October 1, when five prizes were offered for seed winter wheats; and the fifth and last, December 17th, when a dozen prizes were offered upon roots and root crops, including eight for best sample twelve roots of different sorts, and the other four for best five-acre crops. Here we have a programme affording due encouragement for improved seeds, as well as improved stock, excellently calculated to serve as a model for adaptation by our county societies, either in addition to their present autumn exhibitions, or in some cases as a substitute for them—serving, as I think it must, to keep the interests of the society constantly in the minds of the farming community, as well as to promote mutual intercourse and a friendly rivalry. East Lothian, as we have seen, has not quite five hundred farmers, of whom it appears that about two hundred are members of this society—the lowest membership fee being half a guinea, or $2.50, while the larger farmers all pay twice this sum, and the proprietors according to their generosity—several putting down their names for $50, (10 guineas,) and one, the Marquis of Tweeddale, for $75. From the treasurer's report I learn that the Society sustains a reading room, although how extensive a one I was not informed, and pays its only salary ($125) to a secretary.

From his prominent position as an Agriculturist, Mr. Hope is constantly visited by strangers in pursuit of agricultural information, until the matter has actually become quite a serious tax upon his time and good nature. The well known Fenton wheat was originated on the farm, and in a way worth mentioning, in conclusion, although it has been published before in numerous periodicals: in 1835 as, with his father, Mr. Hope was passing a quarry on the farm, the former observed in the centre of it three ears of wheat growing from one root, upon the fragments of rock and soil there collected, and as it was made the subject of remark at the time, by his desire the ears were watched until ripe and their produce planted from year to year. When enabled to sow it in quantities, and to compare it with other sorts, it was found "obviously distinct" both from Hunter's wheat, which it had been thought at first to resemble, and from any other sort known to Mr. H. It is a variety particularly remarkable for the shortness and stiffness or density of the straw; for while its bulk of straw appears to be always less than in Hunter's wheat for instance, the new variety was in numerous trials found to give a *weight* of straw equally great. As to grain, it surpasses all other white wheat in production, there, and the character of the straw, as above described, makes it a peculiarly suitable variety for the richest and most highly cultivated farming lands, where its "short, solid, firm straw" will keep it standing when other kinds would fail from the very fact of the richness of the soil. L. H. T.

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How to Increase the Fertility of Soils.

Near Geneva, Dec. 25th, 1860.

Messrs. Editors—I notice that the Hon. R. M. Conklin of Cold Spring Harbor, in reviewing my remarks on Long-Island Farming, seems desirous of knowing how I have managed to keep up or increase the fertility of my farm without resorting to foreign manures. There is no difficulty in doing that on all our clay subsoils in this part of the state. In the first place you must feed your stock well all the year, and keep them improving both in summer and in winter. Keep them in yards from the time the pasture wont afford them a sufficiency in the autumn, until there is pasture enough in spring to support them fully. Then apply the manure made in winter, and *take care not to overstock your pasture land* in summer, as by so doing you are not improving nor resting your land by letting it lay in grass, if it is all eaten off as fast as it grows. Let the land be covered with grass or clover, and it is getting fat daily, and so will the stock. I also have sown one bushel of plaster, (gypsum) to the acre, on all my meadows and pasture land ever since I commenced farming here.

By rigidly following up the foregoing system, my farm has become far more productive now than it was thirty-five years ago, producing double the quantity of hay and pasture, and corn or oats, and the wheat crop is also more productive; but as I have often said, high manuring is not required for wheat. If we had always dry summers, wheat would stand much higher manuring, but we do not know what the summer is to be until it is past; therefore it is safest to manure only moderately for wheat. For corn or grass I have never reached the point where I thought too much was applied.

J. W. Clarke wrote a very sensible letter, published in Country Gentleman, on over manuring; at least I thought it sensible, because I had sometimes erred in manuring too highly for the small grains.

Now let me tell Mr. Conklin what I saw on Long-Island that I did not take notice of in my article on that Island. I went into a field where there was quite a number of cattle—perhaps 20 or 30, and partly full grades from the improved breeds. Although in the month of November, when cattle are generally in good condition if they ever are, these were then poorer than any I ever owned in the month of April. The fact is, many would have been dear as a gift, for wintering over in Western New-York, for the reason that good cattle could have been bought which would have paid more for their keep than those poor animals were likely to be worth in spring with the same feed. It was a wonder to me how they could live on such pastures, as it would have taken a man with a pair of good forceps or pinchers, to get hold of the grass, and how the cattle could catch it with their teeth, I could not understand. Now any man can easily perceive that such a way of conducting farming must be ruinous every way.

I also went into another field where some blooded mares and colts were pasturing, where the grass was no better; but I have heard gentlemen argue, that to make good and hardy horses, they must be kept poor in their youth. One gentleman, who I thought very intelligent in many things, to prove his argument, said there was the Scotchman raised on his oat meal *crowdy*, and the Irishman raised on potatoes, and where would I find healthier or hardier men when they were at their growth than these? I admitted this, but told him if he would feed his young horses liberally with oat meal and potatoes, he would take more pleasure in looking at them, and I was sure they would be better formed animals when fully grown. The best breed of cattle, sheep and horses, can be made a bad breed by poor keeping for a succession of years. Poor starved animals cannot produce good stock any more than poor land can produce good crops, and it is folly to expect it; yet I am convinced that breeding stock can be kept in too good condition, but that is very seldom the case in this State.

I should like to hear of some of the hill farmers in my native country, trying the experiment of feeding half a pound of oats or peas to each sheep daily, from the commencement of winter until May, for at least two years, and note and publish the result. I am convinced it would pay abundantly, and if they would give them some hay, still better. Good feeding must pay, but bad feeding *never*.

This buying of dung at city prices may pay, and I suppose does, to raise vegetables for New-York or other large cities, but I cannot believe that it can pay to raise grain or grass. It is something like a farmer buying his bread and meat. I know that every farmer can, in this part of the country, make manure enough to keep up the fertility of his farm with stock and clover if he tries to do it. I have kept about one-third, and sometimes one-half of my farm in grain crops yearly since I owned it, and the result is that it is far more productive than when I commenced on it; and every one that knows it now and knew it then, knows that what I write is true. Manure, however, will be consumed much sooner in much of the land I saw on Long Island, than on our drained clay lands in this part of the State: but I have made this article far too long and will stop. John Johnston.

Friend Johnston need have no fear of making his communications too long. He may rest assured that whatever he writes is always perused with great interest by our readers.

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Keeping Farm Accounts.—We were much interested recently in looking over the farm-book of a friend, which was so kept as to enable him to calculate the expense of growing the different crops upon the farm. The cost of manure, cultivation, seed, harvesting and marketing, as well as rent and taxes, was set off against the value of the product as sold or consumed upon the farm; and it was to be seen at a glance what paid best and what least, and where in one case $10 expended in manuring half a field, gave a return of 150 per cent. upon the outlay. Such information is not only interesting but important to every farmer, and can be secured at the trifling trouble of "keeping an account with the farm."

THE MOLE PLOW IN OHIO.

State Ag. Rooms, Columbus, Ohio, Dec. 16, 1860.

Eds. Co. Gent.—In March last I sent you a brief account of the Mole Plow and its operations in Ohio. A portion of my statement was reviewed by your correspondent "Acer," in your issue of March 29, 1860. I put that No. of the Co. Gent. aside, intending to reply to Acer at the time, but neglected to do so, and had forgotten all about it until this morning I accidentally found the No. containing his remarks. He intimates that I am mistaken with regard to the draft. I stated that a common plow, cutting a furrow-slice 8 by 12 inches, required a draft of about 500 pounds. I have frequently taken the Dynamometer (the property of the Ohio State Board of Agriculture,) and attached it to Mr. Gill's plows, in order to determine the draft. Acer concedes the draft of the ordinary plow as stated by me to be correct. I used the same Dynamometer one half day near London, Madison county, in testing the draft of two or three mole plows, and in July, 1859, spent three entire days at the same place in testing the draft of reaping and mowing machines and mole plows, (vide Ohio Farmer for July 16, 1859.) No one disputed the draft of reapers and mowers ranging from 200 to 350 pounds; but we all were somewhat surprised at the comparative light draft of the mole plows.* The dynamometer was carefully observed by the entire committee, consisting of Matthew Rea, R. Cowling, Jas. J. Jones, John G. Dun, Charles Phillis, Jacob Crisman, ——— Armstrong, and myself as chairman, and we could not *all*, during the entire three days, be laboring under a mistake with regard to the draft, when we all in rotation observed the dial of the dynamometer.

I stated that a gentleman under oath in the U. S. District Court, stated that 1,000 rods of drains were made per day with the mole plow. I supposed the gentleman was mistaken, and suggested to the examining attorney to repeat the question; he did so, and the witness answered as promptly as before, 1,000 rods. On this point, although unwilling to impeach the testimony of the witness, I am not any more satisfied than is Acer.

But the gentleman on the witness-stand, must have a very *slow* team if he could do no more than drain about three miles per day, when H. R. Jerome of Monroeville, Ohio, states (vide Co. Gent. for May 31, 1860, page 347,) that "on prairie lands from 10 to 18 miles can be made in a day."

The truth is, about 100 rods per day is as much as can be well made under favorable circumstances.

During the past two years, about four hundred miles of underdrains have been constructed with the mole plow in Fayette, Clinton and Madison counties. On one tract in Fayette Co., which before it was drained produced twelve bushels of corn per acre only, after it was underdrained by the mole plow, produced from 66 to 86 bushels per acre.

Experience with the mole plow has demonstrated that the drains must not have too much fall—if they have more fall than is just necessary to carry off the water the drains "wash," and in a short time they become useless.

Notwithstanding the great satisfaction manifested by our farmers with the results of the mole plow, I cannot regard it in any other light than as being merely a temporary expedient; but it accomplishes great good notwithstanding, because it demonstrates the utility of underdraining, and proves to our farmers that "Book Farming" must not always be ignored.

Jno. H. Klippart.

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* The actual draft of the mole plows, or rather the power required to operate them, is 5,568 pounds, including friction. This result is obtained by a simple mathematical process:

225 (the Power indicated by the Dynamometer,) MULTIPLIED BY 198 (the inches in lever,) DIVIDED BY 8 (the inches in radius of capstan,) IS EQUAL TO 5,568 (the weight of object moved.) Vide Olmsted's Philosophy, page 99.

Or, in other words, "multiply the power applied at the extreme end of the lever, by the length of the lever, (measuring from the centre of the capstan,) in inches; and divide the product by half the diameter of the capstan, the quotient is the weight that the power will raise, friction not being taken into account."—Scribner.

How to Get most Peaches from a Given Space.

On a light sandy soil, worn and washed to within 3 or 4 inches of a yellow clay subsoil, I have an orchard of thriftless peach trees. I have seen it stated somewhere that peaches would not do well on the site of an *old* peach orchard. Mine have been standing perhaps 5 years, but have not attained sufficient vigor to seriously affect the soil unless immediately at the roots. I wish to make a new peach orchard on the same ground, and, as far as advisable, to leave the old trees until the new come to bearing. 1. What will be the objections to thus using the same ground? 2. What will be the best preparation of the soil, the trees to be set in Nov. 1861? 3. How close can the trees be planted if a system of close "shortening" is to be followed, and they are to have all profitable cultivation? 4. What crops and culture, after planting, will make the peaches pay best? 5. What manure will be best, how much, when and how applied? 6. Will it be necessary to remove *now* an old tree which is in the future position of a new one, or can it remain to make another crop? 7. How long can an old tree remain at any given distance from a new one? 8. Can its injury to an adjacent young tree be prevented by a trench? 9. If yes, how and to what extent? Answers, through The Cultivator, requested to all or any. B. *Latitude* 35°.

Peach trees are very exhausting to the soil—as an example, we have seen the place of every principal root, of a row of young peach trees, distinctly marked across a strawberry bed by the diminished growth of the plants. But if the orchard alluded to by our correspondent, has made but little growth in the five years, or has been neglected, the soil will be less exhausted than if the trees had grown vigorously. At the north, the difference between well cultivated peach trees and those standing in grass, is at least ten to one; that is, a properly treated tree will grow as much in one summer as one in grass will grow in ten. This may seem like a extravagant assertion; but it is founded on fact and measurement. A good five year orchard will have covered the whole of the ground with its net-work of roots, if the trees are not over 25 feet apart. Hence, setting young trees in between, as proposed, would not be so well as on new ground. But if the ground is properly manured and kept well cultivated, this drawback will be overcome, and the trees will flourish finely.

(2.) The best preparation of the soil will be the application of such fertilizers as have proved best for common crops—probably a moderate dressing of yard manure, with a small portion of ashes or lime.

(3.) Where land is abundant and cheap, 20 feet is a good distance. The top should not extend over 12 feet, the remaining 8 feet being useful for the admission of air and light all around each tree, and for allowing more room for the extension of the roots. Yet as near as 12 feet would answer, the soil to be kept constantly in good cultivation, with occasional dressings of manure.

(4.) The best crop, if any, while the trees are small, are potatoes, cabbages, or any other low *hoed* crop—no *sowed* crop will answer at all. A wide vacant space should be left near each tree. It would be still better to have no other crop, but merely keep a clean mellow surface, by the use of the harrow or cultivator. After the trees become large, this treatment will be essential, and the raising of nothing else should be attempted.

(5.) Our correspondent doubtless knows what is best for his region of the country for ordinary crops. Probably, as we have already said, yard manure, with some ashes or lime. The quantity must depend on the necessity of the case—say from ten to thirty two-horse loads per acre of yard manure, and twenty or thirty bushels of ashes or lime. It is best applied in autumn or winter; but will do early in spring, if covered to a moderate depth. Surface manuring is much better for heavy than for light soils, and on heavy ones it may lie on the surface not only all winter, but the following summer if somewhat mixed with the surface by the use of a harrow or cultivator.

(6.) It will be very difficult to make a young tree grow on the precise spot where an old one has long grown, and we should not attempt it, unless a very large hole were dug and filled with new or fresh earth.

(7.) We have seen a row of peach trees two feet apart, and on rich soil, grow, flourish and bear for many years. But the distances we have already designated are best.

(8.) There is no doubt that a ditch three feet deep, filled with stone, would cut off the extension of roots, but it could not be of much practical utility—it would, perhaps, cost more than its benefits in most instances.

[For the Country Gentleman and Cultivator.]

CATTLE STABLES.

In the Country Gentleman of December 6, is an inquiry for a plan of a stable for thirty cows. Although it may well be thought that your columns have contained enough on this subject heretofore, yet there seems to be no end to the demand for information or suggestions on this and other leading subjects. Permit, then, a few words from one who has dealt largely, for a small farmer, in boards and shingles. The first consideration in building a stable or hovel, is that it shall be warm and yet well ventilated. Warmth can be secured by building carefully and well, whether the material be brick, stone or wood. If the latter, the joints of the boards should be well battened, and the boarding should, in northern climates, be double, or else the building should be lined or filled in with brick. These may be the cheapest soft brick, as it is only necessary that they should hold together until laid. The floors below and above, should be double, or else tongued and grooved. The former quite as cheap and probably better. The doors well fitted and as few as possible. The windows also tight, and plenty of them; the best being single sashes, 8 by 10 glass, four lights long and two high, set in a well made frame, in which they slide horizontally, and well up from the floor. The manure should never be thrown out of windows, but carried in a wheel-barrow or cart into the yards or manure sheds.

Ventilation is secured by the sliding windows, and by large box pipes carried from the ceiling out of the roof, and furnished with valves or swing shutters in the usual way.

The next consideration is convenience of arrangement, and where it is possible, no plan is better than long double rows of stalls or boxes, with a wide feeding passage between. If the hovel be a "lean-to" addition to a barn, a single row only may be allowed, but a double row saves room and saves steps. In all cases cattle should stand with their heads towards a feeding passage. Room may be saved by carrying fodder in the passage behind the cattle, but the neatness and convenience of the former arrangement, strongly recommend it.

The third consideration is the comfort and cleanliness of the animals in their stalls or boxes, and, it may be added, their safety. First, then, give them room enough—four feet to each beast is not too much, and six inches more is better; and as this article would be "longer than too long" if it discussed all the ways of making cattle stalls, the writer will mention only the plan he likes best, after trying a great many—that is, to have double stalls each at least eight feet wide; mangers two feet wide, the front plank about ten inches high, and the bottom of the manger raised three to four inches from the floor. From the manger to the gutter behind the cattle, 5 feet 5 inches for beasts of ordinary size, say cows weighing 1000 pounds, with a slant of one inch—the gutter a little wider than a shovel, and 5 inches deep. This plan secures comfort and cleanliness, and the gutter being kept full, or half full, of sawdust or dry muck, much valuable manure can be made in it.

For tying, put a strap around the beast's neck, running the strap through a ring to which is attached a few links of chain with a swivel and a ring on the other end, sliding on an iron rod or wooden standard—the iron rod bolted at each end through the partition plank—the wooden standard set at the front of the manger, 6 to 8 inches from the partition. Plank between stalls to extend just so far that cattle cannot, when tied, get their heads into the next stall.

Divide your mangers with a plank set edgewise across the middle, so that each beast may get its fair share of cut feed without reaching towards its mate.

Of course, as a progressive individual, one must admit that the sparred floor plan is better than any other, the testimony of so many good farmers proves that it is as comfortable and wholesome for cattle as any. It saves the great labor of cleaning out stables, and enables one to feed out all his straw instead of using it for bedding; but let one who has tried it describe it. I have not. If you desire, Messrs. Editors, I will send you a ground plan of my farm buildings,—"made all out of my own head"—better than many, but not so good as some. H. L. T.

OBSERVATIONS IN FARMING.

Plowing Deep vs. Plowing Shallow for Corn.

In May last I plowed twenty acres of old pasture for corn, having manured it during the winter before. When we commenced it was very dry, and in consequence the sward was turned over very thin. Some two or three lands were thus treated, while the rest was turned over deeper. The depth of the first did not exceed four inches; but there the corn started strongest, was injured less by the worms, which in great variety—three kinds at least—made great havoc in the rest of the field, and was all the way through much the best crop. Does this teach the propriety of shallow plowing on manured greensward for corn, or does it not?

Sowed Corn.

I can scarcely say enough in praise of sowed corn. I said something about growing it in a previous number; now for some facts about feeding it.

From less than five acres of it, I fed from thirty-seven to forty cows, giving milk from the middle of September to after the 1st of December. During all of this time that pastures were in season, the cows had the run of pasture; but they had corn fodder once every day during the whole interval, and after the feed was gone it formed their entire subsistence, except a moderate allowance of turnips or beet-tops and soft corn. My yield of milk was large; larger than my present feeding, which is intended to be good feeding, will produce.

We will allow that for one half the time the cows only got one-third of their living from the corn, and two-thirds for the other half. Now for the first five weeks, 40 cows at five weeks, is 200 weeks—*one-third* is, say, 67 weeks. For the second, 40 cows at five weeks is 200 weeks, *two-thirds* of which is say 133 weeks, or 200 weeks in all for one cow in milk upon five acres of sowed corn. That would be a year's keeping, or thereabouts, upon 1¼ acres. In conclusion, let me say that I have understated the facts rather than exaggerated them. Further, let me also remind the reader that this corn was grown upon greensward of the Mohawk flats, upon which an ounce of manure was probably never drawn in 70 years that it has doubtless been cropped, and at a most trifling expense.

That brings me to another interesting topic. What will you follow your corn crop with? I answer, with timothy and clover. Farmers have warned me not to disturb even a worn-out meadow on the flats, from the difficulty of getting it back again into grass. The truth is, there is just no trouble about it at all. In March or April, or as early as possible, sow half a bushel of clear timothy, or of clover and timothy, upon your corn-stubble. Select a morning when the surface is frozen but will be sticky before noon; roll your seed in as soon as dry enough, and roll thoroughly. If you sow pure timothy you will get a ton and a half the first season, and three tons the second. I speak from knowledge, Mr. Editor, whereof I affirm.

It is a great mistake, I think, to sow any English grain on the flats. It inevitably lodges or rusts, or both, smothers out your grass if you try to seed with it, and you not only lose a crop, but a year in seeding. Potatoes rot upon them. But they are the natural home of corn, whether sown or planted, and grasses of any kind.

Utica, Dec. 24, 1860. J. G. W.

[For the Country Gentleman and Cultivator.]

Progress of Sorghum Culture in the West.

EDS. CO. GENT.—There are many inquiries from various parts of the country, as to the success or failure of the Northern Sugar Cane or Sorghum Saccharatum. I will give you in brief, my experience, and hope that others who have tried it will do the same, for there are yet some who are still in unbelief.

Four years ago last spring a neighbor of mine gave me some seed, which he had raised the year before, from seed from the Patent Office. This seed was well matured as it proved, for it all grew. I planted it on the 22d of May of that year—latitude 41° 30' north.

I had no means for working up the cane. It made a very excellent feed for cattle. I however took a few canes, put them into my stove boiler, steamed them and boiled down the juice, from which I got about a quart of the very best of syrup, equal I think to any I ever saw, notwithstanding I had been raised among the hard maples and sugar bushes of Jefferson county in your state.

The next winter I took a sample of it to the annual meeting of our State Ag. Society, at Springfield, and claimed it to be the first made in the state. The state officers and several members of the legislature tasted of it, and pronounced it equal to any.

At this time large orders were sent to France to get a supply of seed, which sold here in small quantities at from one to two dollars per pound. Many were induced to try it. The year 1857 was a very unfavorable season for growing the crop. It was very cold during the season of planting, and too cold for ripening in September. This discouraged many.

There was no suitable machines for crushing the cane nor for boiling the juice. Immature cane and poor apparatus for evaporating the juice of that year, caused many to denounce the thing as a humbug. But there were some who succeeded well—made a good article, and *reported progress.*

In the winter of 1858 the friends of the Northern Sugar Cane met in convention at Springfield, to compare samples, for the best of which several heavy premiums were offered. Some forty samples of syrup, and several samples of sugar from the cane, were on exhibition. The mode of manufacturing was there fully explained so far as experiments had gone. The mode of clarifying or cleansing the juice, seemed to be the most difficult point to settle. Several of the statements which seemed to be the most reasonable, were published with the lengthy proceedings of the convention. Some of the samples presented there, proved to be equal to the best we get from the southern market.

Boilers or evaporators were wanted, that would do the work rapidly. Several new inventions were brought out, and now at our state fairs, we find such evaporators that receive the juice at one end, and at the other the syrup runs off into the barrel—no cleansing being used by some, but a continual skimming is kept up.

The year 1859 was more favorable for growing the cane. In some counties in the north-west that year, from twenty to thirty thousand gallons were made. The new inventions for crushing the cane, and the great improvements in the construction of evaporators, and the cheapness and excellence of the syrup, proved to us that it "WOULD PAY." This year has been still more favorable. Many large fields, from ten to forty acres, have been raised, and the crop worked up, and syrup sold at from fifty to sixty cents per gallon. But a more general custom among our farmers is to plant one-half acre; and as there is now from five to ten mills in most of our towns, our cane is taken to them and worked up on shares, the grower receiving one-half the syrup in his own casks. This one-half acre, which has cost the farmer in work about the same as to raise a half acre of corn, furnishes his family with about fifty gallons of syrup, enough for one year's use or more. This syrup, if made from well ripened cane, and carefully skimmed while boiling, is equal to any that we ever get in this market from the southern states. But whether sugar can be made from the cane so as to make *it pay*, is yet a question, though many are firm in the belief that before long barrels and hogsheads of sugar made from the northern cane, will fill our markets.

I have seen sugar of a very good quality on exhibition at our fairs, and from the old adage, that "what has been done may be done," we may expect that entire success in sugar making will be accomplished.

A gentleman from Iowa called on me a few days ago, during my absence, and told my family that he would be here again, and with my syrup make a superior article of sugar. When done, will report progress, and send you a sample. It is impossible to tell the amount of syrup manufactured in the north-west; but we find from some of the census reports, that from twenty to fifty thousand gallons were made in some of the counties, and this in 1859. This year has nearly doubled the amount. In Rock-Island county we have probably made forty thousand gallons this year. Croakers may murmur, and those who know nothing about it may call us humbugs, but they will not stop us from making our own sweetning in a climate where Indian corn will ripen.

There are those who will not succeed with anything. They can raise a good crop of grain only by accident. Their fruit trees wont grow as their neighbor's do. Their cattle and everything they have are of the "slip-shod" kind. The *why* is, they lack system and perseverance. Let them croak and cry humbug, but we will enjoy the sweets of our labor. C. G. TAYLOR.

Rock-Island Co., Illinois, Dec., 1860.

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[For the Country Gentleman and Cultivator.]

DRESSING RAW HIDES.

MESSRS. TUCKER & SON—I say to your correspondent "R.," that I am not a practical tanner—only practicing it sometimes in my own rude way.

I would say to him, in tanning the raw hide of a calf for instance—when the hide is first taken from the animal, spread it flesh side up; then put two parts of salt, two parts of saltpetre and alum combined—(or as much saltpetre and alum as salt)—make it fine; sprinkle it evenly over the surface; roll it up, and let it lay a few days till dissolved. Then take off what flesh remains, and nail the skin to the side of a barn in the sun, or in dry weather stretch on the ground by driving pegs in the edges of the skin. It must be stretched tight, or there will be hard and ugly wrinkles you cannot get out. After drying, and the flesh is sufficiently off, it is fit to cut up. But to make it "soft and pliable like harness leather," put neatsfoot oil on it—fasten it up again, and let it remain a day or two in the sun. Then take a stick about three inches wide, and long enough to work with both hands, made like a wedge on the end, and rub out all of the oil that can be, and it is tanned with the hair on.

Some persons say a calf skin, (a deacon is better,) tanned in this way, and the hair taken off, and blackened, makes excellent boot leather, warranted not to crack. The only trouble is, it will last too long.

Cow skins are stronger and heavier, and are sometimes only salted and stretched; the flesh taken off, cut into strings, braded into halters or other useful things—the hair shaved off with a sharp knife. To make these strips soft, they are oiled, buried in cow manure for a few days, then rubbed and worked till dry.

The skin of a white animal is not No. 1, nor a red and white, nor black and white. Avoid spotted skins of any kind. Red is good; black is better.

For an ox whip, cut these strings about one inch wide at the top, and about eight or ten feet long, running to a point, with a buckskin cracker one inch wide, and eight inches long—hang it to a stick about the length of a walking cane. The stick should be the top of a little pine or cedar. You can crack it so it can be heard as far as you can one of Col. Colt's pistols. It will last as long as the average county insurance companies. WILLIAM RHODES.

Oneida Co., N. Y.

SAVING MANURE.

The Capacity of Soils to Absorb and Retain Fertilising Matters—Muck vs. Clay—Plaster and Clover—Liquid Manure Tank.

MESSRS. EDS.—In the Co. GENT. of Dec. 20, I noticed an inquiry of J. S. of Alleghany, on "saving manure," and about tanks or basins for saving the liquid excrements, &c., and he very truly remarks, "It is an important matter with every farmer, to learn the best manner of husbanding his manure."

There is usually a great loss of fertilizing matter washed from most farm-yards by drainage, caused by heavy rains and melting snows. In New-England, and in the valley of the Hudson, the annual fall of rain is from 36 to 40 inches in vertical depth. Thus a body of water annually falls upon most farm-yards of over three feet in depth, and generally much the largest portion of the water escapes from the farm-yard, carrying with it much of the fertilizing matter of the manure, which in the aggregate is an immense loss to the country. Many farmers cart muck or other material into their yards, which in part acts as an absorbent, whereby a considerable saving of the soluble salts of the manure is effected. Others, in the large grain-growing sections of the country, make use of large bodies of straw; but after all, there is generally much loss of the real quintessence of the manure. Even among our best farmers, they sometimes "suffer an immense loss from the liquid running from their barn-yards."

In the Co. GENT. of Dec. 3, 1857, we find an interesting letter from JOHN JOHNSTON on manures, &c. He writes:

"I have suffered an immense loss from the liquids running from my barn-yards, but I never could contrive a plan to prevent it. I know some of your correspondents would say, get swamp muck into your yards to absorb the liquids. So I would if I owned a swamp. True, there is one only a mile from me, but the owners are like the dog in the manger—they will neither use nor sell a part to me. A number of years ago I offered 12½ cents per load for a thousand or two horse wagon loads when dry, but the owner thought it would make *unsightly* holes in it."

Good swamp muck when used in a dry state, is a great absorbent of liquids, and a retainer of the ammonia and soluble salts of manures, but these are retained by it as a sponge retains such things—by capillarity and mechanical force. Muck is also a good retainer of moisture when applied to dry sandy land. But in point of fact, muck is a much less valuable fixer or retainer of ammonia and the soluble salts of manures, than clay or clayey soils, such as Mr. Johnston's farm mostly consists of. If Mr. Johnston's, or J. S.'s, or anybody else's yards were made basin-shaped, and were fitted with aqueduct logs or other contrivances, so as to carry the surplus drainage to a large cistern or vat (three or four feet deep,) filled with a clayey loam, so that the drainage would leach through the clayey loam, the foul and colored liquid that went on to the top of the clayey loam, would come out at the bottom clear and divested of taste, color, and smell. The ammonia, potash, phosphates, &c., would be retained, chemically combined with the alumina and carbonaceous matter of the clayey loam. These substances appear to possess to a great degree, the power of chemically combining with both the mineral and gaseous constituents of manure and storing them up, so that the rains cannot wash them out; while at the same time, the soil is so constituted that it readily yields up these necessary ingredients to the growing plant as needed. There is abundant proof of the above. There is a divinity in all this. There is no chance or haphazard about it.

The experiments of Prof. WAY were pretty fully published in many of our agricultural journals a few years since. In these experiments the Prof. made use of jars filled with sand to the depth of five or six inches for filtering the foul water from the sewers of London, and fœtid water in which flax had been steeped, putrid urine, &c., &c. It was found that the sand only deprived these liquids of their turbidity, and perhaps a small part of their fertilizing principles; but the color and offensive smell, after filtration, remained in all their intensity. This proved that sand and gravel do not possess the power of fixing the salts and gases of manures. It was discovered that when the sand was mixed with one-fourth its weight of white clay in powder, these disgusting liquids were clear when coming through—were free from smell, and scarcely distinguishable from ordinary water. To sum up the matter, it was found that the clay or aluminous portions of soils possess the power of chemically combining with not only the gaseous compounds of decomposing animal matter, but also with the alkalies, ammonia, potash, soda, magnesia, &c. This, said Prof. Way, is a very wonderful property of soil, and appears to be an express provision of nature. "A power," he says, "is here found to reside in soils, by virtue of which not only is rain unable to wash out of them those soluble ingredients forming a necessary condition of vegetation; but even these compounds, when introduced artificially by manures, are laid hold of and fixed in the soil, to the absolute preclusion of any loss either by rain or evaporation."

We think the above views, expressed by Prof. W., are substantially correct, and of their correctness it seems to us there is abundant proof. That bountiful provision of nature, which treasures up in the soil unwasted for unlimited periods of time those fertilizing ingredients so necessary to the growth and maturity of vegetable life, marks, unmistakably, the wisdom and beneficence of the Creator.

In proof of the Professor's remarks, that rain water does not filter or wash out those organic and inorganic constituents of a good soil—the necessary food of plants, we will mention a few well known facts. The immense tracts of land which are annually overflowed in Egypt were exceedingly fertile in the production of wheat, flax, and various other cultivated crops long before the brethren of Joseph went there to purchase corn. That fertility has been kept up from that to the present time, not so much by the use of animal manures as by the rich deposits of sedimentary matter annually brought down from the sources of the Nile, and spread over those vast plains by the swollen waters of that river. The fine and comminuted particles, when afloat in the water, hold on to their salts and other enriching qualities till wanted for the growing crops, as a miser does upon his gold.

Our western prairies have lain for untold centuries with bosoms bared to the "peltings of the pitiless storms" of melting snows and drenching rains; many of them have been annually burned over time out of mind by the Indians and hunters, and yet the sun scarcely shines on soils richer in all the properties necessary for the production of food for the sustenance of animal life. It is true, the unfed grasses on portions of the prairies are annually left upon the land, and by their gradual decay restore to the soil all that has been drawn from it. Those portions which are burned over receive the benefit of the ashes of the burned grasses, and thus its fertility is kept up. But still the question presents itself, why have not the forty-five inches of annual rain fall, for some six thousand years, long since washed out all the fertilizing matters of these deep soils, and long prior to this have left them as barren as the deserts of Arabia? Prof. Way's experiments answer the question. The alumina of the soil with the carbonaceous matter, holds the ammonia and other salts so they cannot be washed out.

A correspondent of the Rural New-Yorker of 22d Dec., says: "The wheat crop of Wisconsin this year was estimated, by a committee appointed by the State Agricultural Society, who carefully canvassed the grain districts, at *twenty-two millions of bushels* from 1,062,000 acres." Probably more than a million of these acres never received so much as a single wheel-barrow load of farmyard manure. The ingredients for this enormous crop of wheat have been accumulating in the soil, despite of rains and melting snows, "ever since the flood," but these wheat and corn crops will do what the rains never could, viz., sooner or later deprive these Wisconsin soils of their fertility, unless the farmers there in some way restore to them an equivalent for the fertilizing matters extracted by their crops. Perhaps the most economical way in which this can be done will be by the use of clover and gypsum—as has long been practiced in some portions of Western New-York and in some other States. How long the fertility of an annually cropped soil can be kept up by the use of gypsum and clover we will not attempt to predict, but we know it can be for sixty years. We have just received a letter upon this point from the Hon. Geo. Geddes of Onondaga Co., N. Y. Although the letter was not intended for publication, we trust he will pardon us for the extract we make from it. He says:

"You will see on page 109 of my Report,* Prof. Norton's analyses of some soil and underlying rock of a field that had been treated with clover and gypsum, and no manure, for fifty years. This land my father purchased of the State in the last century, taking the first crop of wheat off it in 1799. This year wheat was taken from this field—a good crop, say 25 bushels to the acre, after barley last year. Great care is taken not to manure this field with anything but clover and gypsum, as it is intended to see how long this plan of fertilising will continue to improve the crops under our system of rotation."

Mr. Quincy, in his address, said, "Our western neighbors believe that the fertility of their soil is inexhaustible." If they entertain such visionary ideas, we trust they will discard them before it is too late, and that they will resort to green manuring by the use of clover and gypsum, while their soils are yet fertile, for it is easier and cheaper to keep up the fertility of a naturally good soil, than it is to restore fertility to a worn out soil.

But to return to the subject,—the capacity of soils for absorbing and retaining fertilizing matters. Are the soils in our primitive forests, from which the fire and the axe have been kept out, any less rich in fertilizing matters than they were the day that Miles Standish and his toil-worn companions landed at Plymouth, 240 years ago? Probably not. The black soils shovelled from ditches in wet swamps, and spread upon the banks of the ditches, are frequently found to produce as heavy a growth of oats and as large a yield of English grass, as the most highly cultivated uplands. Now these black mucky soils have been drenched in water for centuries, without having been deprived of these fertilizing ingredients which have been accumulating for ages. These facts most clearly demonstrate the economy of applying clay and swamp muck to light sandy and gravelly lands, as they have the effect of rendering such soils more retentive of moisture, giving them a greater capacity for retaining the strength of manures applied to them, and storing up the ammonia and other gases which falls upon them in the rains and snows.

In the letter of Mr. Johnston, referred to, he says—"My farm is as rich as is profitable for wheat. This has been effected by underdraining and manuring." His is a clayey soil thoroughly underdrained; when he applies manure, what is not taken up by the crop immediately following the manuring, is *fixed* in his aluminous soil for succeeding crops. It does not run off through the pipes of his underdrains—it is chemically combined with the alumina before it reaches the pipes, and there to be retained for future use. But if his was a sandy, gravelly soil, the result would be quite different, as the experiment of Prof. Way proved when sewage and other foul liquids were filtered through sand. It seems to us that all that Mr. Johnston lacks to render his farming operations complete, is a large tank filled with clay or clayey soil, through which the drainage of his barn-yards can be filtered. His clayey loam is better for this purpose than that of his neighbor's muck.

The last of September, in company with Jos. B. Walker, Esq., of Concord, Secretary of the Board of Trustees of the New-Hampshire Asylum for the Insane, we spent a few hours in examining the farm connected with the asylum, and the very great improvements made upon it within the past fifteen years, and if our limits admitted, should be happy to report them—but at this time can only refer to a newly constructed tank or walled basin for receiving the wash, &c., of the establishment.

A main circular sewer of brick and cement laid in the ground, collecting all the drainage of the halls, bathing-rooms, water-closets and wash-house, conducts it to the tank referred to, which is located at a retired point sufficiently remote from the buildings. The tank is sixty-four feet square, and four and a half feet deep. Its bottom is of clay, and its sides are constructed of split granite laid in cement and made water-tight. A drive-way inclining from within and from without, to the top of the west wall, gives access to and egress from it, for the drawing in of absorbents, and for the removal of its contents by teams. Its sides are pierced by gateways at different elevations, through which the surplus water of the tank, charged as it will be with fertilizing matter, can be easily distributed over the lower lying adjacent lands. The lands thus irrigated and enriched become productive in a high degree.

There is upon the farm extensive beds of black vegetable muck, as well also as of clay and clay marl. The tank is to be filled with these absorbents, its capacity being over one hundred and thirty cords. The institution averages about two hundred and thirty persons, and as all the drainage of the halls, bathing-rooms, water-closets, &c.. pass into the tank, we presume that the one hundred and thirty cords of muck, &c., would become saturated to its utmost capacity every six months, so that 260 cords of first quality of manure can be obtained every year from this source alone; besides the surplus liquid of the tank, to be used for irrigation, will be equivalent to many more cords.

We do not suppose farmers generally can build "tanks of split granite laid in cement," but we have quoted the above with the hope that it may stimulate thousands of our farmers to take measures to save at least a portion of the dark colored coffee looking liquids that are now suffered, uncared for, to flow out of their barn-yards down the gutters, to the nearest brook, where they are lost.

Warner, N. H., Jan., 1861. LEVI BARTLETT.

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HUSKING CORN.

"The dry husks rattle and the corn-cobs crack."—Barlow.

We yield the palm to Samuel C., page 382 of Co. Gent. Luke, page 337, was six and a half hours husking forty bushels. But I have heard from several sources, that those stories are too marvellous to be credited, and one man in particular is certain "there is some catch about such big stories." I acknowledge there was a little catch in my case, and I'll be honest about it, and tell how it happened.

The soil where the corn grew was well drained, so that all superfluous water was "*catched*," and carried off; and within six years past it had "*catched*" two heavy crops of green clover, well turned under; and last spring it "*catched*" a good sprinkling of barn-yard manure, which had "*catched*" a great many barrelfuls of liquid manure, as it flowed from the liquid manure pump in my stable; and then, this was "*catched up*" by the roots of the corn, and deposited by some mysterious process in the ears; and when we came to "*catch off*" the husks, we found that the ears and kernels appeared as if they had "*catched*" the dropsy; and we found that a man could "catch off" the husks of one of these large ears sooner than he could husk a little nubbin of half-starved corn, of which no man is able to husk over 15 or 20 bushels per day. This is the *greatest* "catch" there is about it; and if our incredulous friend would make drains in his corn-field instead of his barn-yard, and "catch up" up that liquid manure that flows away to the river—benefitting no one—he will alter his mind about the great "catch" in husking corn. Large, plump ears of corn a foot long—and I have had lots of such—will soon fill a bushel basket; while a fast husker must husk a long while to get a bushel of nubbins. S. Edwards Todd. *Lake Ridge, Tomp. Co., N. Y.*

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* Pages 325 and 326, Transactions N. Y. State Ag. Society, 1859.

[For the Cultivator and Country Gentleman]

"BALLOON FRAMES."---11th Article.

To erect a balloon building requires about as much mechanical skill as it does to build a board fence.—Solon Robinson.

One of the great recommendations in favor of the balloon frame is that it dispenses with mechanical skill, and enables the farmer or others who build it, to do their own work, no further knowledge being required than that requisite to adjust a plumb line, lay out at right angle, and drive nails.

Many suppose that it is not applicable to buildings beyond one and a half stories high, but practical tests show its adaptation to buildings of all sizes.

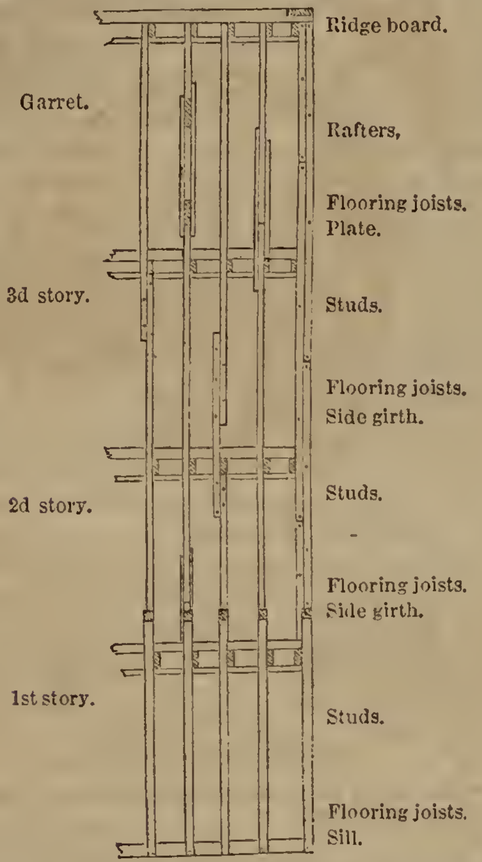

Fig. 1.—Balloon Framing—Three Story Building.

In the engraving, we show the manner of constructing frames for buildings of three stories. The corner stud, 4 by 4, is composed of and built up with two 2 by 4 studs, which are nailed together, breaking joints as the building progresses in height, the splicing of studs is done in the same manner, being nailed together as fast as additional length is required; the joists of the last floor are laid upon the plate and they act as tie-beams to sustain the thrust of the rafters. We consider the splice where the studs butt and have side strips nailed to them, to be the most secure; the lapping splice is very generally used, however, and found to answer every purpose. There is now in the process of erection on Wabash Avenue, Chicago, a balloon frame dwelling house that will cost in the neighborhood of $12,000, in which the lap splicing is adopted throughout; it has a cut stone basement equivalent in quality and workmanship to the best in our eastern cities, and it is designed to be in every respect a first class house.

We show all the plans for splicing that have come to our knowledge, either of which are secure.

The predicted notions of insecurity so freely circulated by the enemies of balloon framing, have been principally based upon its application to three story buildings, and they have utterly failed to sustain themselves. If we consider a moment how thoroughly tied the ordinary balloon frame is from sill to rafter plate, that where a stud is spliced, those each side of it are in their full strength, that the floor beams run from side to side and become tie beams, and that the flooring and side girths run from end to end and act in the same capacity, we must cease to doubt its security. There cannot be any separation of the building, for it is firmly knit together, and every strain and cross strain fully provided for; add to this lining or lathing and outside siding, and it is fully equal to any emergency.

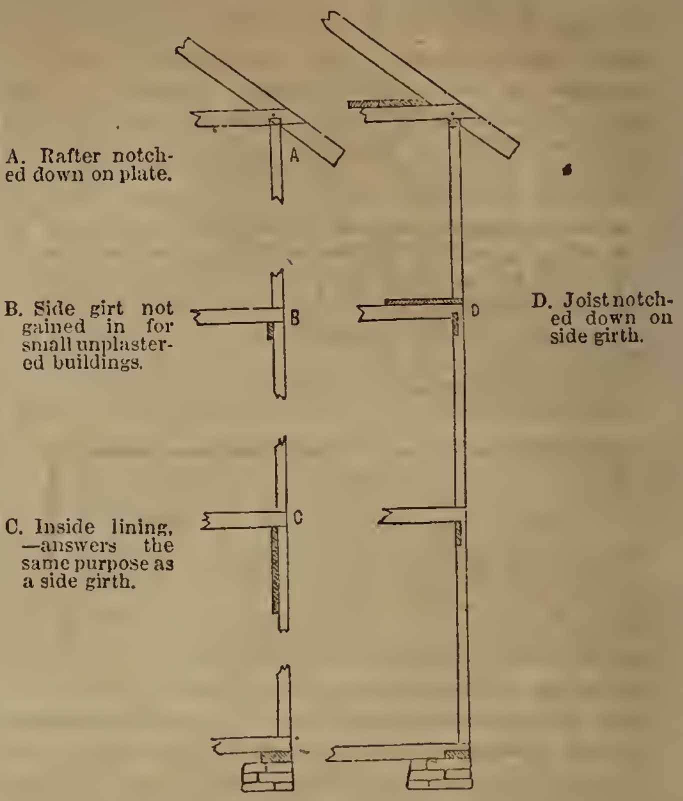
A. Rafter notched down on plate.
A
B. Side girt not gained in for small unplastered buildings.
B
C. Inside lining, —answers the same purpose as a side girth.
C
D
D. Joist notched down on side girth.

Fig. 2. Balloon Framing—Details.

The details shown explain themselves and comprise all of any value in putting such parts of the frame together; the simplest form we deem the best, but we are obliged to sink the side girth in plastered buildings, or in large buildings, where there is a heavy weight of floor. Notching down the floor beams on to the side girths is not necessary, though often practiced.

Balloon framing is a plain simple form of construction adapted to the capabilities of all, and has many points of merit which recommend it above other modes. That it may be successfully applied by those seeking economy, as well as security, is a well established fact illustrated by all the practical examples that could be desired.

As examples of three story balloon frame buildings, we would refer your readers to the Magnolia House, St. Charles, Iowa, Barr's Hotel, Monona, Iowa, Beebee's Hotel, Waterville, Iowa, Birdsey House, Columbus, Wisconsin, Lake Side Water Cure, Madison, Wisconsin, &c., &c., and stores ad infinitum in all our western cities.

GEO. E. WOODWARD,
Architect and Landscape Engineer, 29 Broadway, New-York.

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[For the Country Gentleman and Cultivator.]

Hotch Potch or Save All.

Cut hogs' livers in small pieces—to each liver put one pint of sliced onions—boil them until tender in the liquid where head cheese has been boiled. Then add the scraps of leaf fat (the more the better.) Boil all together ten minutes. Then skim out the contents—run it through the sausage cutter. Put it in the liquid again; stir and season it well with pepper and salt; dip it out and put it in pans or jars. When cold pour a little melted lard over it, and it will keep good until April, unless it is eaten before.

To prepare it for the table, cut it in slices, put in a fryer with a little water, and let it fry a few minutes, and you have a cheap dish, not to be surpassed. Try it and then report.

We have tried the above for several years, and think it the best dish from the pork. An Old Subscriber.

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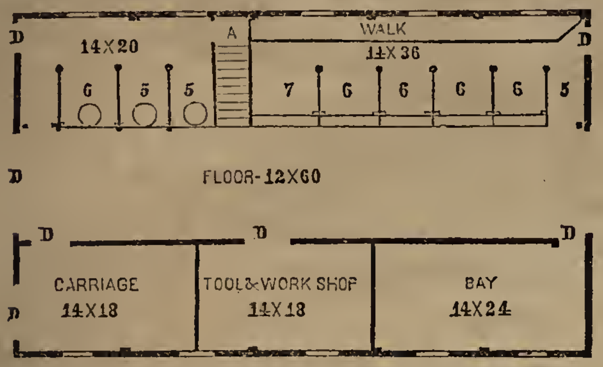
The Perfected Tomato.

A correspondent of the Country Gentleman writes from Holden, Mass., that the "Perfected Tomato" proved good, although it did not yield so well as the old sorts, nor ripen as early, and many decayed without fully ripening.

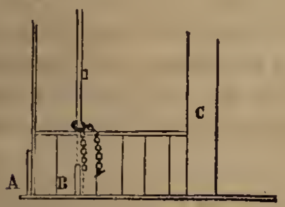
PLAN OF A BARN.

Messrs. L. Tucker & Son—Enclosed I send you a rough plan of my barn, though I fear you will not find it very plain, as I am little used to the business. If there shall be found anything that will add to the beauty or convenience of any one's farm buildings, I shall feel fully repaid for the time expended upon it.

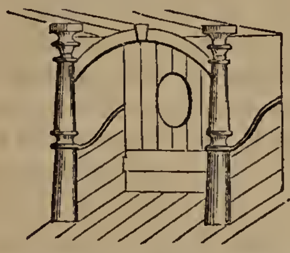


Plan of Barn.—A. Harness room. D. D, Doors—all the outside pannelled. Windows 9 by 13 glass, with blinds. Posts 18 feet.

I sought for two objects, viz., convenience and perfect ventilation, at as small expense as possible. The horse-stable is open to the main floor by the collars used in "Eddy's self-feeding manger," which I like quite well. There are also two large windows in the stable. Opening from the stable, under the scaffold stairs, is a harness-room, in which is also a trap-door leading to the cellar below. The mangers are supplied from the scaffold.



Side view of cattle stall.—A, rear plank of manger, 2 feet high. B, front do., 20 inches high. C, plank, 2 by 12 inches, 8 feet long.



Front view of horse stall with Eddy's patent manger; turned posts in front. Divisions of stalls 2 inch hard pine, with iron band on top.

Over the stable is a granary and seed-room. A double flight of stairs leads from the granary and scaffold, over the cow stable to the "great beams," which, being dropped two feet, furnish abundant room for straw and other coarse fodder, or may be used to dry corn. Thence two flights of stairs lead to the ventilator, which is 12 by 10, and high enough above the ridge to admit a window the same size as those below. The ventilator has four windows with sash and blinds.

The cellar is under the whole building, the part under the stables being used for a hog-pen.

A part of the remainder is used as a henery, having a glass front facing the south. A well with chain-pump, in one corner, supplies the stock with water.

The balance is used for storing farm implements, lumber, &c., the whole front being enclosed and furnished with the necessary doors, &c.

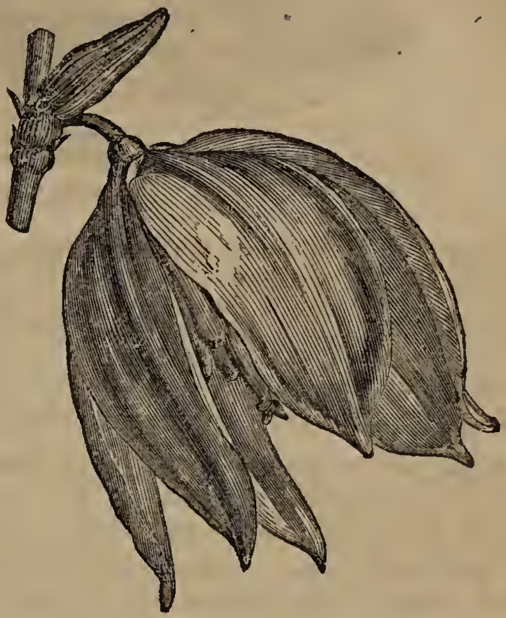
The cellar is as dry and light as any part of the barn, and I consider it of as much importance as it is certainly as convenient.

I do not know as you will find anything of merit in the plan. In a section of the country where there are many fine farm buildings, I have no doubt may be found many improvements. This plan does not necessarily add much to the cost of the barn, while it is an improvement over the old style of building. The barn may be built for about $1,200, clapboarded and painted.

The doors all move upon rollers, or trucks upon the bottoms, which I think is preferable to suspending them by the top. c. w. g. *Holden*, *Mass.*

THE YUCCA* OR ADAM'S NEEDLE.

The Yucca, of which there are some 20 or more species and varieties in cultivation, is a remarkable genus of ornamental plants, all we believe, natives of the United States —some from the north, some west, and some south. Some are shrubby, and among these the *Gloriosa*, *Superba*, and *Serrulata*, which are kept usually in green houses, attain the height of eight or ten feet, assuming a palm-like form, a round clean smooth stem, surmounted by a mass of long pointed foliage. When in bloom they are at once remarkable and beautiful, the flowers, which are bell-shaped, being produced on pyramidal spikes four to five feet high, as in the annexed wood cut. We have seen plants with upwards of 200 flowers all open at one time. The low growing herbaceous sorts are better adapted to out-door culture at the north than the shrubby ones which cannot endure a severe cold. The *filamentosa*, *flaccida*, *angustifolia*, (see cut) and some others, are quite hardy without protection, and when planted in large beds on the lawn are very effective. These are propagated from seeds and suckers, and are rather tardy in blooming, but they are worth waiting for.



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A VALUABLE REMEDY.

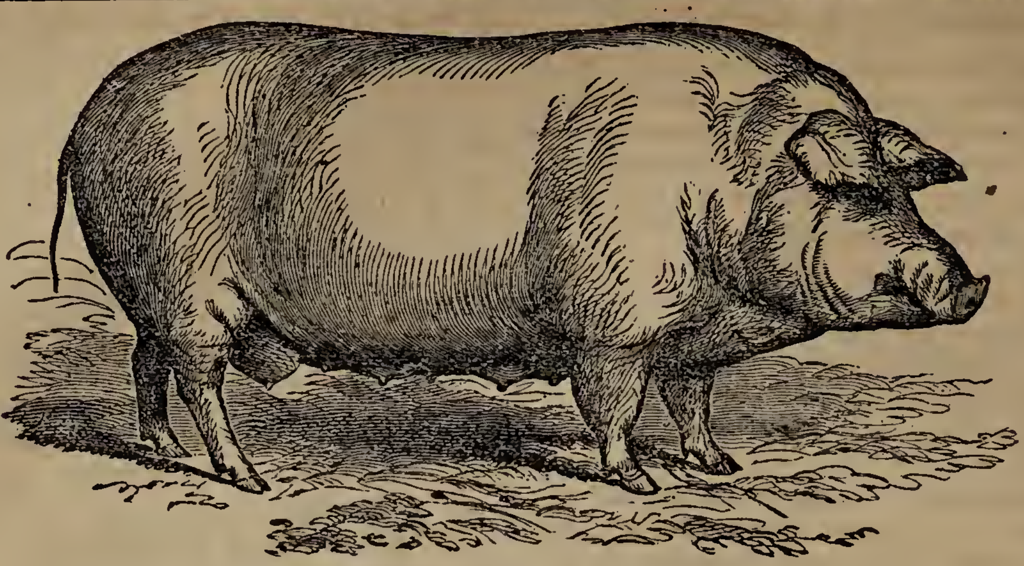
Every family should keep a small quantity of *chlorate of potash*. We have never found anything equal to it for a simple ulcerated sore throat. Dissolve a small teaspoonful of it in a tumbler of water; and then occasionally take a teaspoonful of the solution, so as to gargle the throat. It is nearly tasteless, and not at all offensive to take, and is hence well adapted to children.

Nothing is better than this for chapped or cracked hands. Wash them in the weak solution, and they will be soon well. It is also good for a rough, pimply, or chapped face. It may be had at any druggist's.

Common salt has been strongly recommended for the incipient stages of that dreaded disease *Diptheria;* but we have no doubt this would be better.

We have no doubt that if some scheming medicine man should give a high-sounding Greek or oriental name, introduce some ingredients to conceal its nature, and expend a hundred thousand dollars in advertising, he might make as great a fortune out of it, and possibly as honestly, as some of the great patent medicine venders.

As chlorate of potash somewhat resembles oxalic acid, a deadly poison, in external appearance, a test for its ready identification in case of a missing label, may be desirable. Throw a few grains on burning charcoal or into a wood fire, and it will produce a bright light, owing to the production of oxygen gas, similar to the light produced by throwing saltpetre into the fire, but much more intense.



CHESTER COUNTY SWINE.

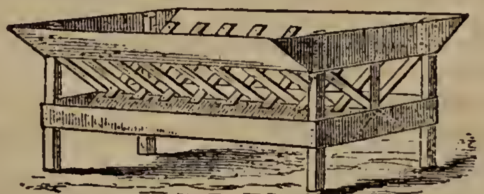
The above cut represents a sow of the Chester County breed of swine, bred by Thomas Wood of Penningtonville, Chester Co., Pa., and afterwards sold to Wm. White of New-Hampshire. She is from Mr. Wood's celebrated premium stock. The Chesters are deservedly a very popular breed, being preferred by those who have raised them, on account of their alleged superior hardiness and large size, while they are said to feed and fatten as well as any other breed.

CARE OF SHEEP IN WINTER.

Sheep Racks and Feeding Troughs.

In some recent remarks on this subject, (Co. Gent., Jan. 3, '61,) we said that "feeding racks for hay and grain under shelter" were requisite, leaving the matter for further reference, which we now proceed to offer, having had some experience in their use and construction.

One pattern, which we have had in use three winters, we figured in the Co. Gent., of Jan. 25, '58, and again insert the figure and description. We find it very convenient, and notice but two trifling objections. It is not as handily cleaned out as some racks, unless a small broom is used for sweeping the troughs; and secondly, unless the rack is clear of hay it is necessary to place the grain in each trough separately, instead of putting it in both sides at once by pouring it along the centre of the rack.



Seventy-five or eighty feet of lumber will make an eight feet rack, which is, we find, the most convenient length on account of ease in moving. The posts, forty inches high, are of three inch scantling; inch boards answer well for the remainder of the rack; 8d nails for nailing to the posts, and 6d for nailing on the slats, are the best size. The width of the rack is twenty-six inches, the lower outside boards are six inches wide, and placed 12 inches from the foot of the post. The upper sideboards are ten inches in width, with the end pieces to match, which should be of good timber to hold well the sides nailed against the beveled ends.

The bottom boards, eight inches wide, are fitted in against each bottom side-board, and nailed there and at the ends, and two boards about ten inches wide, nailed together at the edges at right angles, are placed in the centre of the rack, to form the remainder of the bottom. To this, one end of each slat is nailed—the other against the inside of the flaring top-board; the slats are two inches wide, and about two feet long, and are placed three inches apart from those on the same side. One or two may be put up at each end, to keep the sheep from getting their heads into the rack.

The troughs not only serve for feeding grain, but to catch the fine hay as pulled out, and what is not eaten by the sheep is not under their feet, and may be given to the cattle, which eat it very readily. The flaring side-boards hold more hay, and also keep the sheep from standing with their fore feet on the side of the trough, to eat from the top of the rack, as they will do in the old form of this rack, with upright sides.

There are various other good forms of racks, and separate feeding troughs are more convenient on some accounts. But something of the kind is absolutely necessary to the economical wintering of sheep, and the profitable production of wool and mutton.

When and How Often to Feed Sheep.

On these points we find something a little different from the general received views, from Sol. W. Jewett, in the *Ohio Farmer*, which we condense below for our readers, inviting comment upon the subject from experienced sheep-breeders.

To carry sheep well through the winter, they should come to their food at a regular set time every day, unless the weather be very cold; then they may repose a little longer in the morning. With two feeds a day, to wit, between 8 and 9 A. M., and before 3 P. M., sheep will require one-fourth less fodder than if fed three or four times a day. In no case put off feeding until sundown. The more exercise sheep have the more they will consume, but they rarely eat any at twilight. Healthy sheep will winter well on one bountiful feed per day given about 11 A. M.

The best time to feed grain is immediately after they consume their hay, and before they lie down to ruminate and digest their food. Let the grain be placed in their feeding troughs before the sheep have access to them. Hay should always be fed in racks or boxes. Feeble sheep should be fed no more frequently than strong ones, but with better food.

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☞Our acknowledgments are due to Theophilus Roessle, Esq., of the Delavan House in this city, for a fine lot of Celery, Lettuce and Asparagus—rarities indeed at Christmas time—and fully equal to the best of summer production.

Experiments with the Clover Plant.

The Editors of the Country Gentleman are indebted to J. B. Lawes, Esq., and Dr. J. H. Gilbert of Rothamsted, England, for the Report of their Experiments on the Growth of Red Clover by Different Manures, taken from the last Number of the Royal Ag. Society's Journal, together with several other papers, transmitted through the politeness of Dr. Evan Pugh, President of the Pennsylvania Agricultural College.

The importance of the common Red clover, although scarcely as yet comprehended entirely by all our farmers, is so great that no apology is necessary for devoting a brief space to the subject of the experiments here referred to. It is known that while there are crops which may be continuously repeated without failure, land too frequently sown with clover will in the end refuse to produce it; that the lapse of several years is necessary to remedy the difficulty, and that no other means of remedy have as yet been found. Messrs. Lawes & Gilbert instituted therefore experiments with various fertilizers, "with a view to ascertain, if possible, by what means the crop can be grown year after year on the same land"—but unsuccessfully, except in so far as their labors may pave the way for farther investigations.

During the writer's visit, in the summer of 1859, at Rothamsted, Mr. Lawes, in remarking upon this peculiarity in the clover crop, pointed out a field of barley which had produced crops of that grain for eight or ten years consecutively, and another field which had been still longer, year after year, in wheat. It will convey an idea of the extent and completeness of Mr. L.'s experiments, to mention that he expressed entire confidence in his ability so to regulate beforehand the fertilizers applied to the wheat crop, *as to produce a given crop per acre*—of course subject to risk of hail or other sudden storms—all the way up from 20 or 30 bushels to the most that can be obtained upon standing straw, and, if we are not mistaken, also to continue a corresponding production of this same crop, upon the same land, for any length of time. This, of course, like the manufacture by the chemist of grape-sugar out of pine boards, might involve more expense than the result obtained would generally warrant; but we think we are not misrepresenting Mr. Lawes' remarks at that time, when we say that he put the production of *Wheat* very much in the light of a well understood system of manufacture—when the price the article commands is sufficient to justify the attempt, he could supply the soil with such fertilizers that it would just as unfailingly bring 40 bushels to the acre year after year, as a mill, furnished with the proper raw material, would be sure to produce continuously a specified quantity of the manufactured article.

With *Clover*, however, all attempts of this sort had proved fruitless. Experiment after experiment only served more convincingly to show that the land *will* become "clover sick" if the crop is too often repeated, and that no other hand than that of Time is at present competent—economically or otherwise—to provide against such a result or to restore to the land its lost powers.

The experiments now reported were undertaken more than ten years ago, and have been in progress ever since. Not to follow them minutely throughout, it will be sufficient to say that the fourth or fifth of the continuous series of clover crops were entire failures—one-third of the land being manured previous to sowing the fifth time (1854) with 20 tons per acre of farmyard manure, another third with an equal quantity of farmyard manure, together with 5,000 pounds per acre of freshly burnt lime, and the remaining third left unmanured—all, as we have seen, proving equally unproductive. A second and heavy sowing in 1855, without farther manuring, gave small crops the sixth year; after that, different changes of crops and combinations of fertilizers were employed on different parts—to show that the land was productive for anything else but clover, it is stated that the part of it that was most "clover-sick," gave 58 bushels per acre of Barley, 52 pounds to the bushel,—but "not even the most complex conditions, and the repeated supply of those constituents which are found most to increase the clover crop when it is grown in the usual manner, after an interval of several years, have restored the clover yielding capabilities which the soil possessed at the commencement of the experiment in 1849."

Upon a little patch of garden land only a few hundred yards distant from the field where the above experiments were going on—probably a part of the Rothamsted kitchen garden *for two or three centuries* at least, for Rothamsted is an establishment dating back some time—clover was sown in 1854, and at the close of the season of 1859, six years, fourteen cuttings had been taken from it without resowing—producing the largest yield in some seasons when no clover could be grown at all in the field experiments, and thus indicating that the difficulty with the latter lay in the soil, rather than in any atmospherical peculiarities. It is by no means easy to explain wherein the soil of the garden was better fitted than that of some of the plots in the field to produce the clover crop so long and largely; both must have contained all the ultimate constituents of the clover plant, although possibly in different proportions and combinations. It is to be hoped—although not expressly so stated—that the garden trial will be continued until the capacity of the soil there, for the production of clover, is fully tested.

This liability of Clover to failure has been accounted for presumptively, in a great number of ways, by various agricultural writers; the following, among other assumed reasons, are mentioned at the outset of the present report:

Exhaustion of the soil.

The growth of parasitic plants, which strike their roots into the clover and exhaust its juices.

Destruction by insects.

The injurious influences arising from the matter excreted by the roots of the former crop, or from the decay of the roots themselves.

The growth of the young plant under the shade of a corn crop.

We conclude for the present with the closing remarks of Messrs. Lawes and Gilbert:—

"The practical conclusions from the inquiry may be very briefly stated:

"When land is not what is called 'clover-sick,' the crop of clover may frequently be increased by top-dressings of manure containing potash and superphosphate of lime; but the high price of salts of potash, and the uncertainty of the action of manures upon the crop, render the application of artificial manures for clover a practice of doubtful economy.

"When land is what is called "clover-sick," none of the ordinary manures, whether "artificial," or natural, can be relied upon to secure a crop.

"So far as our present knowledge goes, the only means of insuring a good crop of Red clover is to allow some years to elapse before repeating the crop upon the same land."

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☞ A new Supply of The Country Gentleman Portfolio File has just been received—price by mail postpaid, *One Dollar*.

Familiar Letters on Bee Keeping---I.

Occasionally an old friend writes me asking sundry questions about bees. I find it impossible to give a short answer—that would not appear friendly, and in replying at length, my interest in the subject is such that I find myself constantly digressing, until the bottom of the 4th page warns me to stop. I have thought where the questions were such that the replies would be likely to interest some of your readers, I would forward you them, leaving it to your judgment if worth publication.

My friend writes as follows: "Can you tell me how long a bee lives? Whether physiologists of this day receive the ancient theory that the larva of the working bee can be stimulated into queen bees? I have no good authorities on these points, and find it most pleasant as well as convenient to ask you, instead of going to the public library."

The life of the worker-bee is less than six months. If you remove a queen from a hive, and destroy the queen cells or the young queen, before she begins to lay, you will find the hive nearly depopulated at the expiration of three months, when the hive will be either deserted or robbed by some strong stock; but to determine their length of days more accurately, a queen of a different race must be introduced to a swarm. If you put an Italian queen in a swarm of common black bees June 1st, it will be exceedingly difficult to find a black bee in the swarm after the middle of September, the colony after three months, being almost exclusively the progeny of the Italian queen, which is easily distinguished from the black bee. The above experiments do not give a just idea of the length of life of the worker-bee, for they meet death in so many ways during the working season, that but for their rapid increase they could not exist. The fairest manner to test this question is to introduce a queen of a different race in the autumn, when they have mostly ceased to fly, and are living in comparative quiet. I united two colonies of black bees October 6th, making a powerful swarm, and introduced an Italian queen. I may find a few black bees in the hive after the middle of April, but think it very doubtful. The life of the drone is probably not longer than that of the worker—it is always cut short by the workers after the swarming season, except when a hive is queenless; they are then instinctively permitted to live their full number of days.

The queen lives from two to five years. This fact has been ascertained in several ways; the simplest is to mark a young queen by cutting off a small piece from one wing, which mark always remains.

Your second question, "whether physiologists of this day receive the ancient theory," &c., admits of a short but unsatisfactory answer—Yes—and a long explanation The process of raising queens by supplying a queenless colony with worker combs containing eggs or larva, is called *raising queens artificially;* the process is very simple, and is as follows: Deprive a colony of its queen, and in a few days after you will find ordinarily from five to 12 queen cells in progress; sometimes over thirty. A queen cell much resembles a peanut hanging perpendicularly from the comb; they are most frequently built on the edges of the comb. They will hatch in from ten to sixteen days after the removal of the queen, which depends upon whether they have been started from the egg or from larva—six days from the egg—later than this, (six days,) the change cannot be effected. In a few instances the queen does not hatch until the eighteenth day. The first queen hatched soon destroys all those yet unhatched. The queen flies out to be impregnated from the second to the sixth day of her existence, which impregnation lasts during her life. This takes place in the air, and was witnessed probably for the first time under equally favorable circumstances, last summer, at S. B Parsons' apiary, Flushing, Long Island, a full account of which was written at the time, but I believe has not yet been published. The drone met the queen but a few feet distant from the eyes of two witnesses. The act was of very short duration, and caused, as it does in all cases, the immediate death of the drone. Ordinarily the queen begins to lay from the 9th to 12th day; but in very weak colonies, and in cold weather, the laying is generally retarded, and sometimes for thirty days or more. An unimpregnated queen is capable of laying drone eggs. Drones raised from an impregnated queen are the same as they would have been if the queen had not been impregnated. This has been ascertained beyond doubt in the mixing of the Italian blood with the common bee, either by accident or design.

You will hardly feel satisfied with the foregoing experiment. The most conclusive way of conducting it is to take about a pint of bees without a queen, and put them in a box about six inches square, and give them a piece of worker-comb containing eggs—one-half inch square will answer. One or more queen cells will be started, and in due time the hive will contain a queen hatched from one of these eggs, that certainly would, under other circumstances have hatched a worker. Length of life generally bears some relation to the time required to arrive at maturity; and one would naturally conclude that the queen bee who hatches in five days less than the worker, would be shorter lived; but on the contrary, the queen lives to see many generations of her subjects pass away.

The above experiments cannot be conducted with any degree or nicety of satisfaction, unless a moveable frame hive is used. The Langstroth hive is the best, and his book on the honey bee is the best work on the subject in any language. The last edition contains many beautifully executed and truthful engravings, and a very copious alphabetical index—so that you need only read what you wish to know at first; this index is important, as the book contains about 400 pages. After a while, however, you will delight in reading the book carefully through, from cover to cover. E. P.

[For the Country Gentleman and Cultivator.]

CURING HAMS.

Eds. Co. Gent.—I see many tedious and troublesome directions for curing hams, and on reading one of them from Mr. Pardee, in the Co. Gent. of 6th December, I concluded to give a little description of my mode, for the benefit of plain old fashioned farmers like myself, who do not care to be troubled with so many nostrums. After cutting out the hams they are looped by cutting through the skin so as to hang in the smoke-room shank downwards; then take any clean cask of proper dimensions, which is not necessary to be water tight, cover the floor or bottom with coarse salt; rub the hams in fine salt, especially about the bony parts, and place them on the bottom of the cask with the rine down, covering the floor of the cask first; sprinkle dry fine salt evenly all over them wherever it will lay, so as to cover them perhaps half an inch; then lay others on them, letting the shank dip or incline considerably, placing salt in all cases between them, where they come in close contact with each other, or with the sides of the cask; small lumps of salt will be found very convenient for this purpose. Sprinkle fine salt over this as before directed, giving the thick part of the ham a good share, as the shank begins more and more to incline downwards. Proceed in this way until the hams are all salted, always observing to place them skin down and flesh side up; and if they sometimes get standing too much on end, the difficulty may be obviated by using a small piece of pork as a *check*. Let them lay about five weeks if of ordinary size, if larger, six weeks, and then smoke them.

You will perceive my process is simple—just a little dry salt and nothing more—not even a cask, if it is not at hand; a good box will answer. At first when I commenced this mode, for a few years I took them out and re-salted after three or four weeks; but this was soon found unnecessary, as a little experience taught me about how much salt was required. I am not now over particular as to the time of letting them lay in the cask; if it does not suit my convenience they are often allowed to remain a week later. Now about smoking.

I have constructed a smoke-room over my kitchen, in the garret—made dark,—and so as to admit smoke from the chimney. Here I hang the hams and let in smoke until they are smoked enough, and this completes the entire operation; nothing is done more—no securing against flies, for they never enter this dark chamber, and when we want a ham we go to the smoke-chamber and take it from the hook. During a period of twenty-five years I have not lost a ham, but before adopting this mode, through careless smoking, injudicious salting, or from flies, I was continually suffering disappointment with my hams. Possibly hams may have a better flavor by using other ingredients with salt, yet where I have had opportunities of tasting such cured hams, I confess my inability to detect their superiority. R. M. Conklin.

P. S. I might add that hams salted as above mentioned, rarely or never get too salt; once or twice in my experience, they required a slight salting in frying.

Preparing Poultry for Market.

The most successful and profitable way is to do everything *well*. The cultivator who sends his fruit to market, from fine thrifty trees, and packed in the best manner, obtains a more ready sale at higher prices than his neighbors, understands well this truth. It is so with poultry; the difference being three or four cents per pound between that which is dressed and sent to market with ordinary treatment, and such as has been fattened well, and dressed and put up in the most skillful manner.

B. & S. BEATTY of Cayuga county, N. Y., are well known in the New-York markets for their skill and success, and for the excellent poultry which they furnish; and having known personally something of their establishment, where they fatten several thousand annually, and been also furnished by them with additional information, we trust we shall render our readers an acceptable service by giving a brief statement of the management they have adopted.

They purchase their poultry, (chiefly turkies,) at the close of autumn or early in winter, of the neighboring farmers. For, although it would be practicable, as they remark, to raise several thousand turkies on one farm, it would prove unprofitable, as they would require feeding during the whole season, and such large flocks would be subject to disease if kept living together. In ordinary seasons they consider the raising of turkies in proper numbers, the most profitable business in which farmers can engage—that is, in those seasons in which grasshoppers and other insects are in plenty, on which the turkies mainly live till nearly grown, requiring not more than three weeks liberal feeding to fit them for market. They prove also indirectly profitable by destroying troublesome insects.

For fattening, they are fed on good, sound Indian corn Indian meal mixed with warm water is excellent as a change Wheat is very good, but rather costly. Barley, oats and buckwheat are rejected, as being too light food, and they make white and poor looking poultry when dressed. They should have plenty of good clean water, and have access to the bare earth. An orchard is a good place. It is considered essential to give them plenty of pulverized charcoal.

They are never killed unless they are fat. Nothing can make a poor bird look well—although bad dressing will make the best look poor. The heads are not cut off, but they are hung up by the heels on a rope tied horizontally from post to post, where they cannot become bruised by struggling, and are then stuck with a small knife inside the throat, and they as quickly bleed to death as when decapitated. Smaller fowls whose heads are cut off, should always be hung up in this way. They should never be killed with full crops. All that is required in thus bleeding turkies in the throat, is a knowledge of the place of the arteries on each side of the neck. This mode of killing is as effectual as any other, and gives a better appearance to the poultry.

They are generally picked dry, taking care not to tear the skin. They are then scalded a few seconds in water nearly boiling, and the pin feathers all removed. The after scalding, which is repeated two or three times quickly, alternating with cold water, gives them a smooth, plump appearance; and they are then laid on clean shelves to dry. They must not be packed till *entirely cold.* They are usually packed in clean barrels, wrapping each animal in white paper, and with clean rye or wheat straw between them.

Poultry is always greatly injured by freezing, and care must be taken, both in cooling before packing, and in sending to market, that they do not suffer from this cause.

For the New-York market, *their intestines should never be taken out.* For Boston and other eastern markets it is necessary.

A good hand will dress about forty turkies in a day. Clear, cool, dry days should be selected for the work, and damp days specially avoided. In packing, press the wings closely, and press the bird down hard on the breast, the legs extending back; and lay down by successive courses, with straw between each course. Neat, clean boxes would probably be better.

WASHING MACHINES.

Washing days have long since been looked upon as one of the most formidable evils of domestic life, and "to meet with smiles a rainy washing day," was regarded by the poet as demanding a courage somewhat approaching that of a heroic martyr. Knowing these things, we have observed for many years with much interest every mechanical contrivance for lessening this toil; and the great number of machines which have been presented at our agricultural exhibitions and mechanical fairs, shows that others have sympathized with this feeling. Very few of these numerous contrivances, of course, are of much value. Many years ago we selected one which appeared the best, and have since used it with great advantage, and figured and described it in the Illustrated Annual Register for 1857. For more than twelve years no improvement could be found upon it, for ordinary household use.

But during the present year our attention was attracted by various advertisements of the "*Union Washing Machine*," with such apparently extravagant assertions in its favor, somewhat in usual advertising style, as "a child can operate it;" "no soaking or boiling required;" "will wash a garment in two minutes;" "does not wear or injure the fabric," &c. We were induced to examine the machine, and were much pleased with the simplicity of its construction, and ease of its working; and having tried one of them, *they appear to possess all that is claimed for them.*

The work is done by rolling and pressing the clothes at the same time; and the water being kept hot under cover, obviates boiling. We have found the following advantages in this this machine:—

1. It is neat and compact, and occupies but little space.
2. It confines the hot water under cover, and does not steam the room.
3. It is very easily worked.
4. It obviates soaking and boiling.
5. It does not *rub* the garments.
6. It saves at least half the labor required by other machines, or pounding barrels, wash boards, &c.
7. It is simple in construction, cannot easily get out of order, is strongly made, and will probably last many years without repairs.

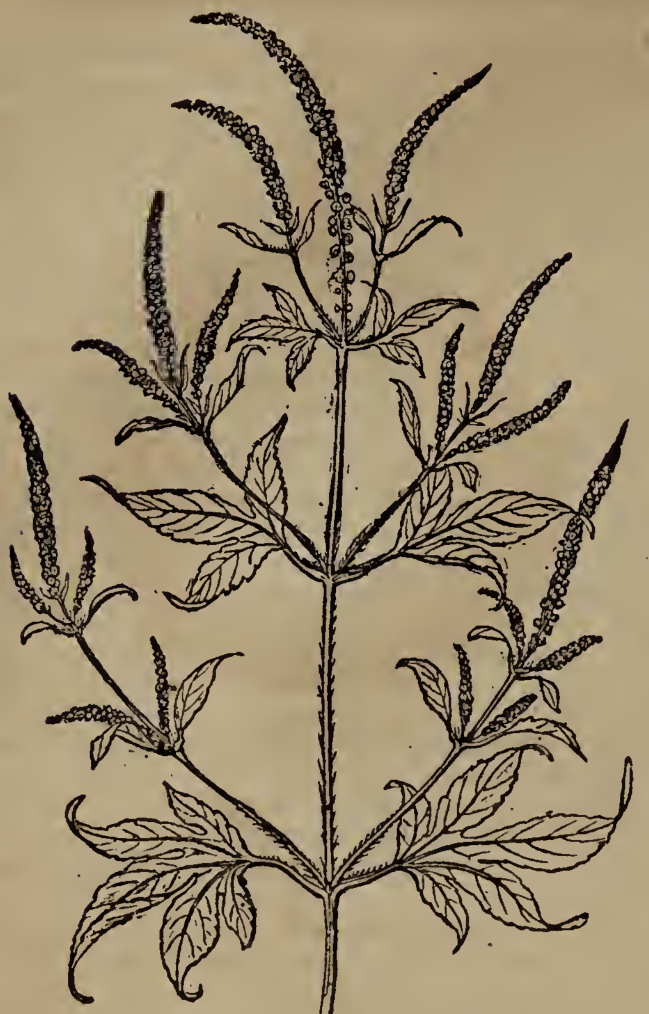
As a proof of the rapidity of its work, the mistress of the house where it was *tried for the first time*, washed thoroughly all the flannels used for the week in a rather large family, in *ten minutes*, by the kitchen clock. For flannels it appears to be particularly valuable. We do not at present know of any more acceptable new year's present which a farmer may make to his wife, than by procuring one of these machines, which he may do at a moderate price, of J. JOHNSON & Co, 457 Broadway, New-York.

[For the Country Gentleman and Cultivator.

SELF-REGULATING WIND MILLS.

EDITORS CO. GENT.—In your number of Nov. 29th, you state in reply to a question, that "Halliday's Patent Wind Mill is the only reliable and really self-regulating for speed and force in use." I wish to correct your mistake. I have had in use for five years, one of Elgar's self-regulating wind mills, which has never been out of order—the self-regulating apparatus not even adjusted since first put up, and has completely governed its action in the most severe gales that we have had in that time. It needs no attention but to occasionally oil the journals. The only difference in its motion, in a good wind and storm, is that it goes just perceptibly slower in the gale. I have no acquaintance with Mr. Halliday's machine, but it cannot excel this one in its power of governing itself in all weathers, without attention of any kind.

Leawood, Md., Dec. 15, 1860. ISAAC HARTSHORN.



THE RAG WEED OR AMBROSIA.

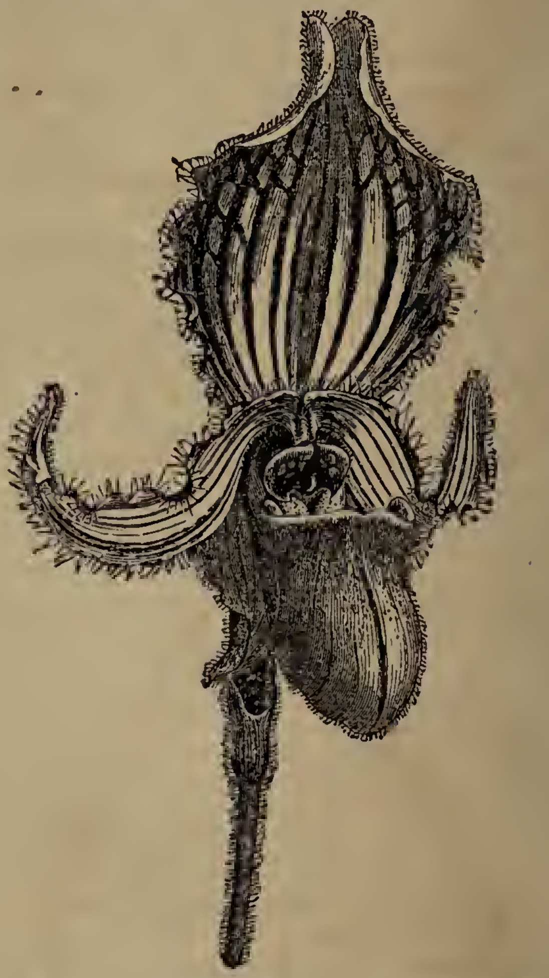
During a journey the past autumn, by a circuitous route, through the entire breadth of Ohio and Indiana, this weed was observed to be more abundant than any other and perhaps all other weeds together. We think it would be a safe estimate to say that at least one-third as many acres were covered with it, as with the corn crop, abundant as the latter is known to be, and that the rag weed would average at least half a ton to the acre. If therefore, as we suppose, there are five million acres of corn in these two States, then there must be at least one and a half million acres of the ambrosia, equal to half a million tons. These weeds would load a train of farm wagons a ton to each load, as closely as the wagons with their teams could stand, *two thousand miles long!* Instead of this bitter, unpalatable and worthless weed, the soil might as well have grown half a million tons of clover, and form a train of equal length. At five dollars a ton, the crop would then be worth two and a half million dollars.*

We have never had any other experience with this weed, than to learn that if simply destroyed it will not grow. No weed can extend and flourish under a judicious rotation, adapted to its peculiar character. Some are destroyed if hoed crops are largely introduced; others are driven out by broadcast grain; and others again cannot flourish in grass. A combination of these, with thorough management, will usually clear out all weeds. The ambrosia is apt to follow wheat; but evidently the soil has been allowed beforehand to become foul. It is said that if plowed under, it is nearly as enriching as a crop of green clover; but if a heavy seeding of weeds is given at the same time, it is costly manure.

THE CYPRIPEDIUM FAIRIEANUM.

FAIRY'S LADIES' SLIPPER.

Most of the readers of this journal have no doubt seen and admired the beautiful indigenous species of Ladies' Slipper, which are found in shady woods, generally where the soil is moist and peaty. They may not know, however, that the genus is one of the most admired and highly prized of what are classed as "*terrestrial orchids*," that is, orchideous plants that are grown in the earth instead of on blocks of wood suspended in the air and designated as "*ærial.*" This Fairieanum was introduced into England some two or three years ago from the East Indies, and is quoted in the English catalogues yet at $25 per plant The accompanying figure conveys a good idea of the form; the colors are unique and beautiful.



The large upper erect sepal is of a greenish white, veined distinctly with dark green and deep purple. The two lateral curved petals, resembling horns, are also white with stripes of green and purple. The lower petal or lip is very large, is of a dull green, delicately veined and netted with purple. "The blossoms," says Sir Wm. Hooker, "are certainly among the most exquisitely colored and penciled of any in this fine genus." Dr. Lindley described it in the Gardeners' Chronicle as an "exquisitely beautiful species." We do not know whether it has yet reached any of our American collections. The cultivation of this curious and charming family of plants, the *orchids*, has not received any considerable degree of attention from our professional plant growers, but we learn that recently their culture has been taken up with a good deal of zeal by two or three parties, and we may soon expect to hear more about them.

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Brooms.—How are home-made brooms manufactured? I have a small quantity of brush, and should like to work it up this winter. Young Farmer. [Will some experienced broom maker please reply?]

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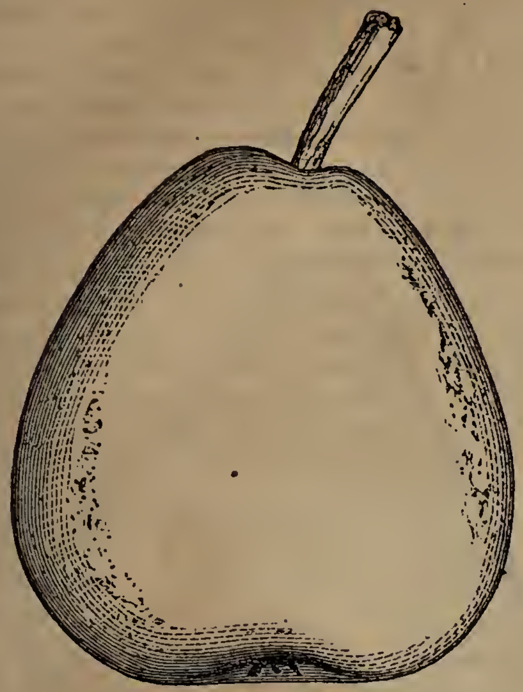
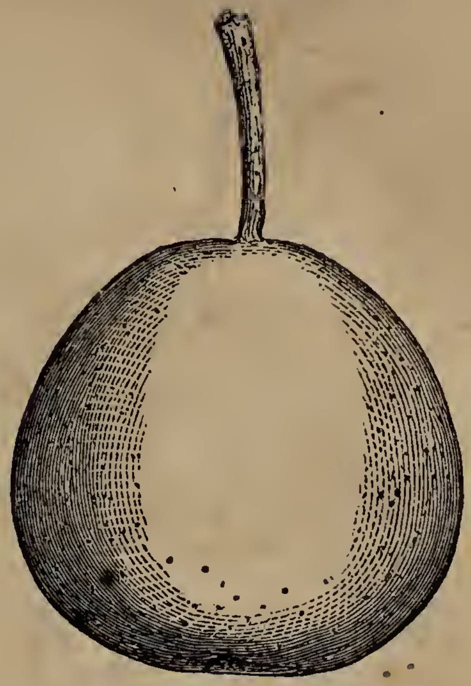
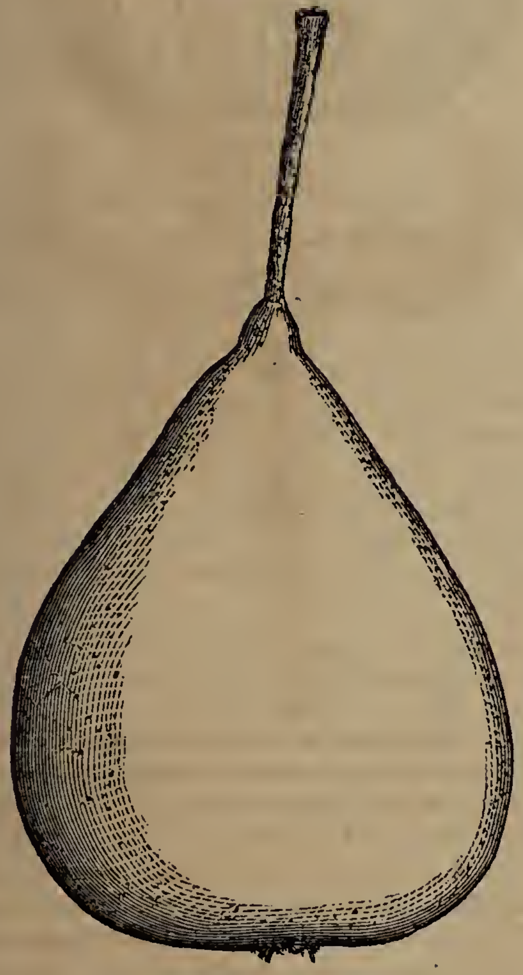
* This may be an over-estimate for the northern portions of those States, but it is unquestionably an under-estimate for the southern, especially so far as relates to the acreable product of a weed often several feet high and in dense crops.



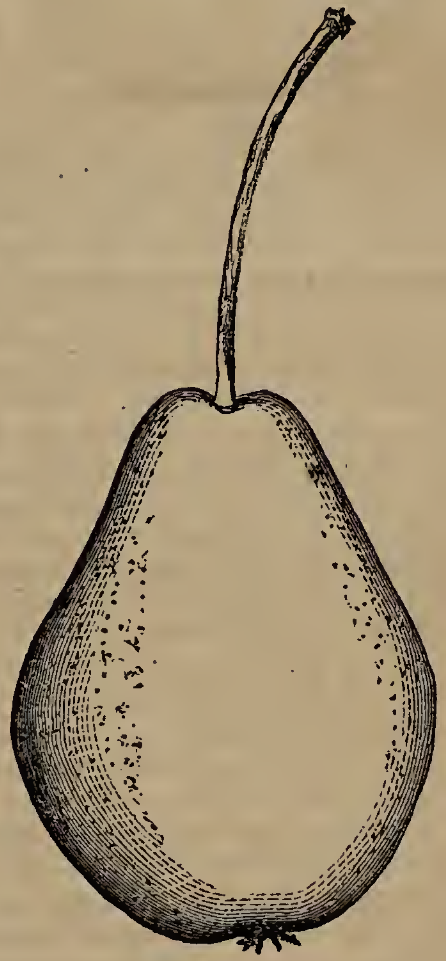
OSBAND'S SUMMER.



DOYENNE D' ETE.



TYSON PEAR.

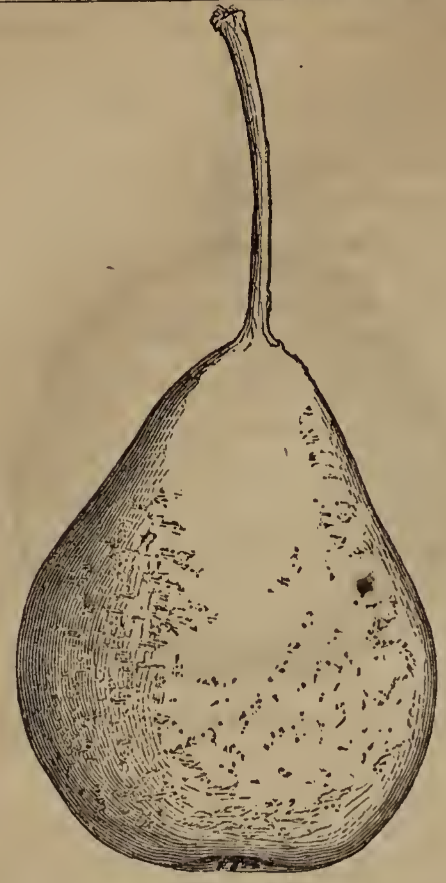


SKINLESS PEAR.

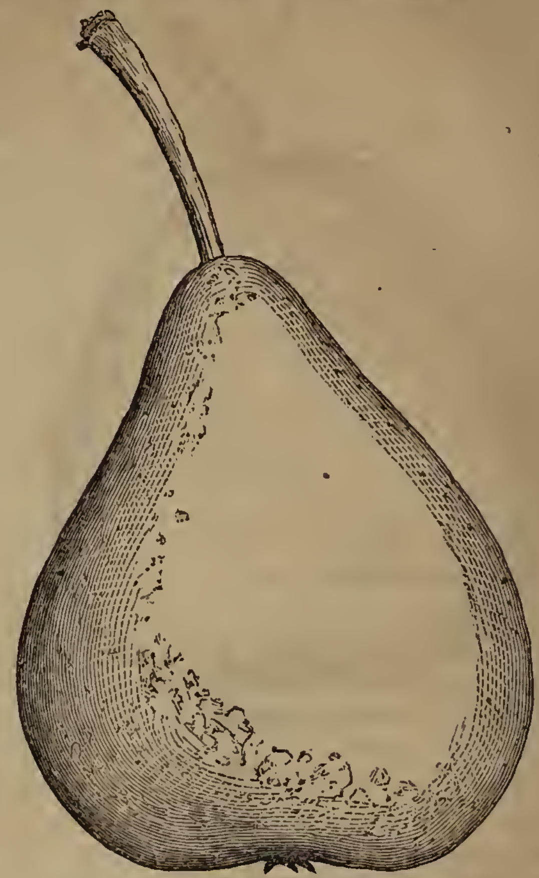
THE OLD AND NEW PEARS.

The improvement of the pear, and dissemination of many new and excellent varieties, are marked features in the progress of pomology. Forty-three years ago, William Coxe described sixty-five sorts, in the best and most complete American work known at that time. Yet out of this number, only about four sorts are now regarded as worthy of cultivation, namely, the Madeleine, Skinless, Seckel and Virgalieu or Doyenné. We have since added, equal to these as an average, the Summer Doyenné, Osband, Giffard, Brandywine, Tyson, Rostiezer and Bloodgood, for summer; Bartlett, Ananas d' Eté, Kirtland, Washington and others for early autumn; for other autumn varieties we have such fine ones as Flemish Beauty, Anjou, Belle Lucrative, Bosc, Autumn Paradise, Nouveau Poiteau, Urbaniste, Louise Bonne of Jersey, Superfin, Sheldon, Lawrence, Beurré Hardy; and others. And yet nothing has been found equal to the Seckel for high flavor, nor to excel it for general hardiness; and for general value, where it is not liable to crack, no new sort scarcely equals the Virgalieu.

In order to assist our readers to make good selections, it is well to name not only good varieties, but those that



ROSTIEZER.



BEURRE GIFFARD.

have been rejected as of inferior value. Some think they have "the best pears in the world," till they see and know of better. We have had the old French Jargonelle sent hundreds of miles, as a new and valuable sort, "very superior," because the honest cultivator was not familiar with our delicious early varieties; and the Summer Bell and Bonchretien are still sometimes eagerly asked for of nurserymen.

The best very early pears—ripening at the same period—and about the time that farmers usually begin to cut their wheat, are the *Madeleine*, an old sort, and *Summer Doyenne*, (Doyenné d' Ete,) a new one. Each sort has its admirers. Some have pronounced the Madeleine the best; it is larger and more melting, while the slight grain of acidity makes it very agreeable as a summer fruit. But it is not so productive as the Summer Doyenné, the tree is not so hardy, and is more subject to fire blight; while the Summer Doyenné, although less juicy, has undoubtedly the highest flavor. On the whole, the votes preponderate in favor of the latter.

Osband's Summer ripens a week or two later than the preceding, and is valuable for the hardiness and fine growth of the tree, its even bearing, and the fair appearance and good quality of the fruit,—although not of the highest flavor. *Bloodgood* ripens nearly the same time, is about the same size as the Osband, is often superior to it in flavor, but sometimes falls below, being somewhat variable; and the tree is slow in growth. Nearly or quite equal to Osband's Summer, and a little later, is the *Sanspeau* or *Skinless*. It is an old variety, whose merits have been too much eclipsed by newer sorts. It is remarkable for its handsome and free growth, and for growing well in different soils—probably no pear thrives so well as this on such as are light or sandy—for its great productiveness, and for the uniform quality of the fruit. It has almost a glossy smoothness, and a very thin skin; whence its name. If it was a new sort, "far brought and dear bought," it would have many admirers.

The *Beurre Giffard* would stand at the head of summer pears, (next preceding in maturity the Rostiezer and Tyson,) if it was a free grower. It is almost as bad in this respect, as the Nelis among later varieties. The growth is slender, crooked, and feeble. The peculiar purplish shoots, and the long slender leaf-stalks, enable the cultivator to recognize it very readily among all other sorts. The pear itself is of very high quality,—rich, juicy, melting, and perfumed. It is of full medium size, and the tree a good bearer. Notwithstanding its poor growth, it must stand as high as any kind of its season, which is about the same as Osband's Summer and Bloodgood, or a little later.

About the same season, there are several other summer pears, of various degrees of value:—*Dearborn's Seedling* is a rather small pear, mostly of high quality, but in some places of little value. It is a handsome grower, and an early and good bearer. Notwithstanding its smallness, it may be regarded as worthy of a place in large collections. The *Zoar Beauty*, a native of Ohio, is a fruit of moderate flavor, but the fine growth and productiveness of the tree, and the handsome appearance of the fruit, render it worthy of attention. It grows freely as a dwarf, and the fruit on our trees has been three inches long, and two and a half in diameter. It is subject to rot at the core, which may be prevented, as in all other summer pears, by early picking and house-ripening. The *Limon*, a Belgian variety, is a small obovate fruit, buttery and melting in texture, and usually, not always, with a high "very good" flavor. It should be in large collections.

Immediately after the preceding, or near the close of summer, several fine pears ripen. Among these the *Rostiezer* is undoubtedly the highest flavored. It holds the same rank among summer pears as the Seckel among those of autumn. Unlike the Seckel, however, it is a strong grower, and it makes a handsome and productive tree. The fruit is a little below medium in size, juicy and melting, rich, sugary and perfumed. We have never heard any one object to its flavor. Equal in general value, but not quite so high flavored, is the handsome and excellent *Tyson*. It is a fine upright grower, larger than the Rostiezer, and of uniformly good quality. It is a tardy bearer on pear stocks, although ultimately quite productive. As a dwarf, it bears early and profusely. The *Ott*, a new Pennsylvania pear, a seedling of the Seckel, is a rather small, and delicious late summer sort. The tree is a moderate grower. The figure which we give is drawn from an unusually large specimen, grown on the grounds of Ellwanger & Barry, of Rochester. The *Pulsifer* is an Illinois variety. The tree is an upright and vigorous grower; the pear about medium in size; it is melting and juicy, and if well ripened is "very good." The *Brandywine* is one of the best late summer pears, and originated in Delaware county, Pa. It is a vigorous and handsome grower, both on pear and quince. The fruit is full medium in size, but rather dull in appearance. Its quality is usually "very good," although sometimes inferior. *Manning's Elizabeth* is a beautiful and very good fruit, but too small to become a great general favorite. *Moyamensing*, of Philadelphia origin, is a vigorous and productive tree, with an irregular, obovate, rough or knobby fruit. It is "good," sometimes "very good," but must be taken at exactly the right time in ripening, or, as Dr. Brinckle, who introduced it, once remarked to us, "it should be eaten by the chronometer."

There are some old summer varieties, that may be worthy of a passing notice. *Amire Joannet* is the earliest known pear, ripening a week before the Madeleine; it is very small, rather handsome, and the tree a free, upright grower and early bearer. We consider it however as entirely unworthy of cultivation; for although sometimes tolerably good, is more usually dry, mealy, poor, and worthless. The *Little Musk* or *Primitive*, is a week later, even smaller than the preceding, but a profuse bearer, and better in quality. It is but little or no earlier than the Madeleine and Summer Doyenné, and is therefore rejected. The *Muscat Robat* is larger, better, and later, but has not good qualities enough to render it worthy a a place with the best sorts. The *Sugar-top* is about the size of the Madeleine and ripens with it, but the flavor is poor. It is admired however by those who never saw a good summer pear. The *Jargonelle*, one of the best of the old sorts, matures two weeks after these, and if picked early and house-ripened, so as to prevent the core-rotting to which it is so liable, it is often of quite good quality; to some its agreeable acidity renders it a favorite. Nearly all persons would however greatly prefer the Bloodgood, Giffard and Osband, which are nearly as early. The *Julienne* was formerly highly prized, but is not now cultivated in the Northern States. In the South, it is greatly improved both in size and quality, and is one of the very best early pears for that region, ripening, along the borders of the Gulf of Mexico, before midsummer. No sort is equal to it for early bearing, nothing being more common than to see small trees in the nursery row bending under loads of fruit.

[For the Country Gentleman and Cultivator.]

FARMING IN NEW-BRUNSWICK.

Messrs. Editors—The President and Directors of the Mechanics' Institute in the city of St. Johns, a short time since, proposed two prizes of fifteen and ten guineas, respectively, for the best Essays upon the subject—"New-Brunswick as a Home for Emigrants—with the best means of promoting immigration and developing the resources of the Province."

This drew out a number of Essays upon this, to us, interesting subject. They were subsequently published at the expense of the Government, and from one of them I send you the following account of the products of two of our New-Brunswick farms.

One feature, perhaps, you will be somewhat surprised at, viz., the quantity of turnips raised. In British husbandry, as you are aware, this esculent is an essential. But even in our climate, with a long cold winter, we have many farmers, principally however, natives of Great Britain, who raise annually from 1000 to 5000 bushels of turnips, which are used for feeding cattle intended for beef.

The farms are severally owned by Messrs. Ferguson, Rankin & Co., Bathurst, and Francis Ferguson, Esq., St. Johns.

First—Village farm contains 334 acres cleared land, well fenced, and without a stump, besides about 50 acres pasture land, partially cleared, but not fit for the plow. The bulk of the land has been reclaimed from the wilderness within the last fourteen years. The quantity under crop in 1859, was 136 acres, from which were raised:

160 tons hay.
300 bushels wheat—weight 61 lbs.
1,400 " oats, " 38 "
50 " barley, " 48 "
3,500 " turnips.
2,100 " potatoes.
240 " carrots.
75 " mangold wurtzel.
17 pigs were killed, weighing 5,740 lbs.
8 head of cattle killed. " 4,740 lbs.

Besides 25 which were purchased from and fattened on the farm.

Stock on the farm Jan. 1860.

12 horses old and young,	46 head horned cattle,
27 sheep,	13 pigs.

Ninety acres land now plowed, ready for crop next season, 30 of which were stumped last year and plowed in October.

Second, or Somerset Vale Farm.—Containing 200 acres cleared land, well fenced and without a stump, besides a quantity partially cleared, and capable of pasturing at least 50 head of cattle. A portion of the above has been long under cultivation, but it is only within the last few years that an attempt has been made at systematic farming. Previous to that very little stock was kept on it, and the greater part of the crop was removed and consumed elsewhere.

Quantity of land under crop in 1859, was about 130 acres, from which were raised

150 tons hay,
80 bushels wheat—weight 62½ lbs. per bush.
About 2,000 " oats, " 39 "
3,000 " turnips,
750 " potatoes,
74 " carrots.

The stock on the farm January, 1860, consisted of

7 horses, old and young,	26 sheep,
41 head horned cattle,	5 pigs.

72 acres plowed last fall for crops next spring.

Hammond River, N. B., Dec, 10, 1860. J. D. M. KEATOR

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THE GARNET CHILI POTATO.

Messrs. Editors—A few facts about this most valuable potato may be useful.

1. It is hardy. In this county this year potatoes have been very much diseased, especially on wet lands. Some farmers that I know have lost 90 per cent of their crop. Varieties usually hardy have failed, and almost every one has suffered. I have dug 420 bushels of Garnet Chilis, without finding one diseased, while Prince Alberts and Pinkeyes, in the same field, were damaged 30 to 50 per cent.

2. It is prolific. On one little patch measuring exactly 97½ square rods, the yield was 210 bushels, liberal heaped measure.

3. It is generally of good, even size, and in appearance surpasses most kinds.

4. It is quite white inside—is a very fair table potato, as good as the Prince Albert I think, but not so good as the Carter. If planted early and well ripened, it keeps remarkably well.

5. All things considered, have we another variety as valuable?

I think that by common consent it should be called the "*Goodrich Potato*," (good rich potato as it is.) We farmers owe its originator a debt of gratitude, which I am glad to learn our State Agricultural Society has acknowledged. Let individuals do so also, by sending to Mr. Goodrich for some, and not buying from anybody else.

St. Lawrence Co., N. Y. T. L. HARISON.

[For the Country Gentleman and Cultivator.]

Agricultural Matters in Canada West.

Now that I am writing you to renew my subscription to the Country Gentleman, perhaps a few notes in reference to agricultural matters in this part of the world, will not be wholly unacceptable. Though a clergyman, I take a deep interest in rural affairs, and make them, as I think many clergymen might do with advantage, my recreation. But for the higher work assigned me by Providence, I should make farming my business, in preference to any other secular pursuit. In this choice I am not influenced by the haze of romance and the "enchantment of distance," by which many in other walks of life are attracted towards farming, only to be disappointed by their experience of its hard toils and stern realities. I have known something of "blistered hands," and "hayseed in the hair," and am well assured that all the farmer's gain and independence is honorably *earned*. But increased observation of men and things, only deepens my conviction of the superiority of agriculture to most other callings. Of this no more at present, or the "notes" will not be noted.

A six months residence in this region, has satisfied me that for farming purposes it ranks among the most fertile and advantageous on this continent. The farmers are chiefly English and Scotch, with here and there small representations of other nationalities. It is an old settled country, with a thrifty, well-to-do population. Old country methods of tillage are chiefly in vogue. The turnip is a favorite crop, largely raised, with thorough, and therefore most successful cultivation. Properly attended to, carefully housed in winter, it is well worthy the place it holds here and in other British regions. It yields abundantly, leaves the land in good tilth, and is acceptable as food to all kinds of stock.

All the cereals are largely raised in this neighborhood—except Indian corn—against which our farmers seem to have contracted a sort of prejudice. They say it does not succeed well, but this I scarcely know how to credit, since it does well in other localities as far and even farther north. One of our farmers, a very intelligent man, says he could never get more than 25 bushels to the acre, with the very best attention. This is an elevated region, and may possibly be an ungenial realm for "King Corn"—but I shall not believe it until I "try, try again."

You are doubtless aware that this neighborhood is somewhat renowed for its stock—especially Short-Horn cattle and Cotswold sheep. Pigs and poultry are somewhat neglected. I see a good many "land pikes" in my travels, perfect contrasts to the original, typical *sus*, which the Divine Creator pronounced "good." The unsightliness of these lank, lean, raw-boned, long-jawed, caricatures of the hog, is a sufficient reason for carrying on mercilessly, a war of extermination against them, *to the knife;* while the difficulty of fattening them, is a *pocket* argument to the same effect. As for poultry, they are so overlooked that no place is assigned them in the annual shows of either township or county. An acquaintance of mine, the proprietor of a "one-acre farm" in these parts, intends to "astonish the natives," and rouse them to improvement *if he can*, in the items of pigs and poultry.

One of our best breeders of cattle, F. W. Stone, Esq., has just imported a fine young herd of Herefords from England. They were obtained at Lord Bateman's autumn sale, and are described by the Mark Lane Express as "one of the largest and most choice selections of these animals we have ever known to leave our shores at one time." The herd consists of five young heifers and one young bull. They will doubtless add to the wide and well-earned fame of their enterprising proprietor.

Our farmers are not much given to the study of agricultural literature. The Canadian Agriculturist, a monthly, is the only journal on rural affairs, so far as I know, published in the Province. It contains good solid matter, but needs to be made more spicy, and to be illustrated, in order to get a wide circulation. We need take a leaf out of your book in this respect. American agricultural papers do not largely circulate here, partly because of the cost of the postage, and partly because "Yankee-fied" things are objects of prejudice with many.

A good deal of attention seems to be paid to the matter of *implements*. Our farmers are, in this respect, somewhat in advance, I think, of the generality of Canadian agriculturists.

Farm-buildings, generally speaking, are inferior. Stone is abundant, and therefore cheap—lumber reasonable—lime plentiful and unsurpassed in quality, so that facilities abound. Even in cases in which substantial and costly buildings have been erected, there is little or no manifestation of *taste*. Indeed, with but few exceptions, the Canadian farmer does not aspire to realize what, with a correct idea of the capabilities of rural life, you designate in the title of your valuable journal, "*the country gentleman*." W. F. C. *Guelph, C. W.*

[For the Country Gentleman and Cultivator.]

LARGE vs. SMALL FARMS.

The Country Gentleman has been for a long time so well supplied with matter, original and selected, that no place seemed left for anything I could furnish. But line upon line and precept upon precept, may do good, even on subjects by many supposed quite hackneyed.

Long ago I urged upon your readers the almost universal need of reform in the size of farms. These, throughout the country, are large, much beyond the capital used in their cultivation, and which, to bring them into the most profitable state, should be used upon them. If by high cultivation the lands of East Lothian, in Scotland, will bear a yearly rent of fifty dollars per acre, and pay the farmer a fair interest on the capital and labor bestowed on them, surely our lands about Albany may, by a similar outlay of capital, be made much more profitable than at present, when the owner would think himself fortunate in a tenant that would pay him, one year with another, five dollars per acre. It is quite likely that the Scotch tenant paying fifty dollars rent makes more clear profit than ours paying five.

Yet we have few men having skill and capital that are willing tenants at the low rate of five dollars the acre. Such men usually prefer to use their capital in the purchase of wild land at the west, on which to work out a farm for themselves. The temptation of cheap fat lands is constantly before their eyes, and draws them away from the old States, not only from the barren regions of New-England, but from the fertile plains of our own State. I believe this is bad economy in the emigrant, as well as injurious to the country he leaves. Most of the wealth of the world comes from strictly co-operative industry. This industry is most successful in densely settled countries and large cities.

But there are other motives higher than mere money-making that should influence the father of a family in chosing a home for his children. Moral and intellectual culture of their manners and minds is of more value even than good culture of fields and successful breeding of sheep and oxen. High culture of boy and girl, to make them elevated men and women, can only be generally practicable in densely settled communities. In such only, can the best associations be easily accessible. That country is best beloved that is richest in human associations. Ruskin says—"The desire of the heart is also the light of the eyes. No scene is continually and untiringly loved, but one rich by joyful human labor; smooth in field; fair in garden; full in orchard; trim, sweet and frequent in homestead; ringing with voices of vivid existence. No air is sweet that is silent; it is only sweet when full of low currents of under sound, triplets of birds, and murmur and chirp of insects, and deep toned words of men, and wayward trebles of childhood. As the art of life is learned, it will be found at last that all lovely things are also necessary; the wild flower by the wayside, as well as the tended corn, and the wild birds and creatures of the forest, as well as the tended cattle; because man doth not live by bread only, but also by the desert manna; by every wonderous word and unknown work of God."

The farm should breed as well as feed the best men and women, and to that purpose the owners should direct their most anxious care and their most presistent labor. J. W. S.

How to Grow Fruit Trees from Seed.

Will you, or some of your correspondents, give me a correct way of growing peach and cherry pits? How to freeze, and how long, pear, quince and apple seed before planting, and how deep, and at what time put in the ground? How to grow chestnuts and horse-chestnuts? The best plan of starting grapes from cuttings? Will Arborvitae, Hemlock and Spruce seed grow, sown in the spring? By answering the above before planting time you will oblige R.

Peach and cherry pits should be kept moist or fresh—with cherry pits, this is very important; a few weeks drying will render them nearly worthless, and drying a shorter time may prolong their vegetation a year. They should immediately on taking from the berry, be mixed with moist sand, earth, or mould, and kept moist. They may be planted late in autumn or very early in spring. If planted in autumn, the soil should be quite light, to prevent the formation of a hard crust, which will retard their coming up. Peach stones should not be allowed to dry more than three or four weeks. Exposure to frost only serves to crack and open the shell of any seed. If kept properly moist, and the shell is cracked, freezing is not essential. When apple seed, or peach stones, have been allowed to become very dry, a quick scalding, and then freezing, several times repeated, will much assist vegetation. Pear, Quince and Apple seed, are quite similar, and should be treated alike—being planted half an inch deep in a moist strong soil, and an inch in light soils. Peach pits should be planted nearly two inches deep—and deeper rather than to allow them to dry up in a dry soil. Chestnuts and Horse-Chestnuts should not dry a day—but the fresh and moist nut, the moment it drops from the tree, placed in moist sand or mould, and kept moist till planted. If this care is observed, there will be no difficulty whatever. Otherwise, they will certainly fail. Grape cuttings should be about a foot long, of one year's growth, placed sloping in the soil, and the earth packed closely or beaten about them. It should be done very early in spring, but better in autumn,—and protected by a thin coat of fine manure spread on the surface. Evergreen seed, if good, will grow when sown in spring—but the young plants must be shaded from the hot sun.

[For the Cultivator and Country Gentleman]

WINTERING COLTS.

Editors of Co. Gent.—By sad experience I found it a bad way to winter colts in a box stall. Three years ago I kept a colt in a box stall, 12 feet square—gave it good hay and two quarts of oats a day. When grass came in the spring it looked fine, and I felt proud of my colt. I turned it out and in a few weeks it was *spavined*. An almost total disuse of its limbs for six months had rendered its limbs unable to stand the active life of the open field. Its hoofs also grew very long, and perhaps aided in ruining the colt. Give your colts a large field, *all winter, to roam in*, with an open shed. Give them two quarts of oats a day the first winter and good hay, and you can count upon raising good sound horses, if you raise the right breed. Caleb Winegar. *Lake Grove, N. Y.*

[For the Country Gentleman and Cultivator.]

Two Simple Rules in Cheese Making.

1st. *To ascertain how much cheese you ought to get from your milk.*—Multiply the number of pounds of milk by eleven—point off two figures for decimals, and the product is pounds and decimals of a pound of cheese fresh from the press.

Example.—Given 495 lbs milk—how many pounds of cheese ought it to get? 495X11=54.45 lbs., or 54 45-100 pounds.

This rule applies to the summer. In October you may safely make your cheese a little heavier from the same milk, or perhaps the October milk has a little more cheese in it. The rule is founded on experience. Of course this green cheese must lose a great deal in curing, since both the butter and casein constitute but about eight per cent. of milk.

2d. *For ascertaining the quantity of salt for cheese.*—Multiply the number of pounds of milk by three—point off three places for decimals. Your answer is in pounds and decimals of a pound.

Example.—How much salt for the curd of 495 lbs. milk? 495X3=1.385, or one pound and 385-1000 of a pound. Now reduce this decimal to ounces, by multiplying by sixteen—point off three decimals as before. Your answer is 385X16=6 160-1000 ounces, or 1 lb. 6 1-16 oz., is the quantity of salt required for the cheese of 495 lbs. milk. J. C. W. *Utica.*

[For the Country Gentleman and Cultivator.]

MACHINES FOR MILKING.

Eds. Co. Gent.—Having seen several inquiries in the Co. Gent. for information about machines for milking cows, I have thought it not improper for me to say through your paper that at the last State Fair, which was held at this place, I saw what I supposed was a fair trial of such a machine, which resulted in an entire failure.

I owned the cow upon which the trial was made and know that the circumstances were all favorable to the success of the machine, if it had had the power to do the work required of it.

The cow was in the habit of being milked between six and seven o'clock in the morning. But on the morning of the trial she was left till 9 o'clock, to allow the owner of the machine time to collect a committee to witness the operation. Consequently the flow of milk would be unusually free. The cow has ordinary sized teats, milks easy, and stood perfectly still; yet the machine progressed not more than half as fast as a smart milker would have done by hand. And after the operator pronounced the job finished I drew more than a quart, I think, by hand.

The machine was made so as to have the teats inserted into a tapering tube, and by a lever power the air was exhausted from the lower end of the tube and thus became a suction pump on the cow.

One word more in regard to the impracticability of machine milking. It is a fact well known to every person in the habit of milking, that hardly any two cows require exactly the same style of milking, especially in finishing up. Some will milk clean by pressing the teats only, while with others it is necessary to pass the fingers far up the udder, and by a heavy pressure force the last milk from it.

Then again the size of the udder and teats and the location of the same—some setting far apart, others close together; some setting well forward, and others far back, are obstacles constantly in the way of machines.

Then, too, how inconvenient if a cow starts, or is driven unexpectedly while milking with a double suction pump attached to her. An operation I apprehend not very quieting to a wild or timid disposition. B. S. Carpenter.

Chemung Co., Dec. 31.

STRANGLES AND GLANDERS.

I wish you could, in your valuable CULTIVATOR, give a cure for the strangles, and also the glanders in horses. They are diseases that horses are very much troubled with here. J. H. *Campbellton, N. B.*

We gave in a late number, some directions relative to the treatment of strangles. Glanders, or pulmonary consumption in the horse, according to Dr. DADD, is a superinduced disease, brought on by the bad treatment of slight ailments, more especially colds. He says, "Suppose we select a horse whose general health shall be impaired, let him be exposed to the storm several hours, and he will take what is called in popular language, a "cold." Let him now be treated according to the "kill or cure system,"—*bleeding* and *purging*. The secretions become impaired; loss of appetite sets in; the "coat stares;" the nostrils discharge acrimonious matter; ulcerations of the cartilage and nose follow, and we have a pure case of glanders. Or,—confine the animal in a crowded stable; morbific matter is deposited, and tubercles of the lungs result." He states that neglected horses often have glanders; while those under good management, belonging to our wealthy citizens, rarely or never. As illustrating the mode of cure, he gives the case of a fine dark bay horse, whose symptoms were a discharge of purulent mucous—breath fœtid—nasal membranes, purple, red, and with ulcerations; coat staring, appetite poor, flanks tucked up, respiration gurgling. *Treatment*,—nasal passages daily injected with pyroligneous acid—diet, equal parts of wheat flour and oat-meal—drink, eighty drops of elixir of vitriol to a pail of water. Some medicines were given, as symptoms required, which we cannot here detail. A drench was occasionally given of three ounces of brandy with one of salt. The treatment lasted three weeks. He recovered, except an occasional cough, and sold for one hundred and seventy-five dollars.

[For the Country Gentleman and Cultivator.]

FATTENING HOGS ON DRY CORN.

EDITORS CO. GENT.—Your correspondent, W. HALL, tells of a neighbor of his—a farmer all his life, and over seventy years of age—fattening his hogs in a dry pen, *without water or slops*, giving them *nothing but corn*. He speaks in terms of commendation of this practice, and says—"Had I known the above 20 years ago, it would have saved me a great deal."

I had always thought that hunger and thirst were but the cravings of nature, of which all animals more or less partook, from the highest order in the scale of beings down to that of the lowest. To satisfy *hunger*, a bountiful Creator has made the most ample provision—to quench or satisfy *thirst*, although "men have found out many inventions," no substitute has ever yet been found equal to pure water. Now I will not say that hogs cannot be fattened with corn alone without water, for I have never yet made the experiment, but I do say that hogs will fatten very well with a regular supply of *both these articles*. There is a way, however, that some farmers have of giving their hogs *too much water*. It is this—pouring large quantities of it into the swill-tub, and then persuading *themselves*, for the *hogs know better*, that it is very good food. Too much *slops* won't do for either men or hogs.

From some observation and experience, I have come to the conclusion that hogs in a close pen require something more (if you would have them do well,) than either corn and water, or *Indian meal* and water, for I have tried both this winter, and think there is economy in *grinding corn*.

I found that mine would leave either corn or meal when soft brick were pounded up and thrown in the pen—that they partook of charcoal with the greatest avidity—that wood ashes seemed to be relished, and sometimes a little coarse salt.

Some farmers are in the practice of fattening their hogs in a lot or small enclosure, where they can get to the ground; in that case they will most likely find in the *soil* what they require. Ground bones, I incline to think, would be serviceable in the pen, as well perhaps as to cows and calves in the stall, but not having made trial of them cannot say.

I have heard persons maintain that sheep did not require water; but will they not eat snow as a substitute? Let any one try, that is so disposed, to fatten a lot of sheep on clover hay and corn—give them as much as they will eat, but carefully exclude water, and he will save *corn* by it—not have quite so many to feed, as there would probably be *a few to skin*. "Prove all things, hold fast that which is good." C. *Salem Co., N. J.*, 1*st mo.* 1*st.*, 1861.

[For the Country Gentleman and Cultivator.]

To make 1 pound of Butter into 4 in Cooking.

EDS. CO. GENT.—Enclosed I send you an excellent recipe for the kitchen, which we have had the satisfaction of using in our family for some years past. If you think well of it, please make it generally useful by giving it a place in the Co. GENT. A TERRE HAUTE SUBSCRIBER.

Economy--Excellence--Convenience.

ROUX.—This is the technical name of a preparation of great importance in the French cuisine. It may be translated *thickening*, and with it is formed the celebrated velouté and allemande, the basis of most other sauces.

To prepare Roux, according to Francatelli, take one pound of sweet fresh butter—perfectly free from milk or water—put it into a large iron sauce-pan—melt it over a gentle fire—remove, and add three pounds sifted flour—mix thoroughly with a wooden spoon or paddle. When mixed and perfectly smooth, place the sauce-pan in an oven sufficiently heated to bake bread, for *one hour precisely*, taking it out, beating and stirring it well, every *ten minutes*. Then turn it out on a plate, smooth it over with a case knife, and put away for use. It will become a substance somewhat resembling cheese.

To use, cut off a portion and mix it carefully with warm, (not hot) broth, milk or water, and season for whatever sauce you desire. Some practice will be necessary to hit the exact quantity required. Mix a little in a bowl perfectly free from lumps, before adding to the sauce, which, when done, should be as smooth as oil, without the sign of a lump. Hence the name velouté, smooth as velvet.

Roux, when properly prepared and mixed, may be used for giving body to soups, gravies, stews, and made dishes of every description—sauces for vegetables, fish, stewed oysters, terrapins, meat pies, fricassees, &c., &c.

Also for various kinds of sweet sauces for puddings, and with eggs and vinegar, a good dressing for slaw, salads, celery, &c.

For Espaniol or Brown Sauce.

Take some of the Roux and a lump of loaf sugar, and brown carefully over a brisk fire in an iron vessel. This may be done to any shade, but be very careful not to burn it, or it becomes bitter and spoiled for delicate sauces.

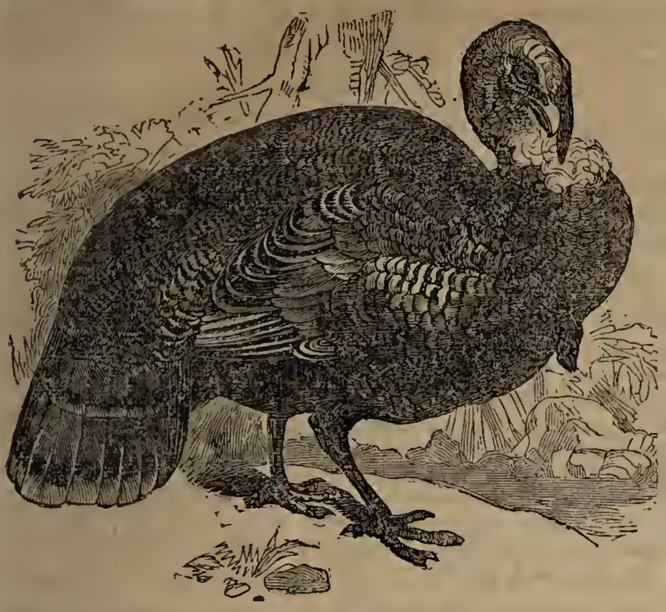
In this way, in Queen Victoria's kitchen, one pound of butter is made into four for cooking, and a great deal of trouble saved. Francatelli was her chief cook.

How to Cure Hams without Smoke.

EDS. CO. GENT.—That course, in any undertaking, which accomplishes our object with the least labor and in the simplest manner, is the one which should recommend itself to our consideration.

After trimming hams pork-house style, and rubbing them well with salt, I sprinkle salt over a floor or platform, and lay them down flesh side up, so as to economize space. To each ham I give a teaspoonful of pulverised salt petre, then pack on salt as long as it will lay. In this condition I leave them until they have taken salt, and before the fly makes its appearance. Then I take them up, knock and rub off with a wet cloth, all adhering salt, expose them to the air to dry, and when dried hang them up in *a high, dry, dark and airy loft, to cure without smoke*. Thus cured they will pass in any market or meet the palate of the most fastidious epicure.

Railroad Pass, near Paris, Ky. W. K.



[For the Country Gentleman and Cultivator.]

ON REARING TURKEYS.

BY C. N. BEMENT.

With most persons the rearing of turkeys is found rather difficult, owing probably to the want of a better knowledge of the nature and habits of the bird. It is important in breeding animals of any kind to attend to their natural instinct as much as possible, and it is no doubt from the neglect of this that all the difficulty of rearing them may arise. If attempts to rear turkeys, therefore, have not been crowned with success, we may impute it to the want of a knowledge of their natural habits, and the unskillfulness and inexperience of those to whom they have been entrusted.

As to the relative value of the ordinary varieties, it would be almost difficult to offer an opinion; but those who suppose the *white* turkey to be the most robust and easy to rear, are decidedly mistaken, both in theory and in practice where the certain test of experience has shown to the contrary. The copper-colored, the brown and ashy grey are among the most difficult to rear; but their flesh is considered very delicate—a circumstance, however, that may partly result from their far greater delicacy of constitution and the consequent extra trouble devoted to their management.

The black and bronze-colored, which approach nearest to their wild relative, are decidedly superior in every respect, not only as regards greater hardiness, and consequent greater facility of rearing, but as gaining size and flesh more rapidly, and that being the very best and prime quality—the wild turkey only excepted. Fortunately, too, the bronze and black seems to be the favorite colors of nature, and dark colored turkeys are produced far more abundantly than those of any other hue.

In hatching turkey chicks we have found it a good plan to place two or three fowl's eggs under the sitting turkey after one week, to teach the young turkeys how to peck. This is a good plan, for the activity of the chickens does stir up some emulation in their larger brethren; the eggs take but little room in the nest, and at the end of summer you have two or three very fine fowls, all the plumper for the extra diet they had shared with the little turkeys.

In four weeks the little turkeys will be hatched; and then the question arises, "how are they to be reared?" Some recommend removing the chicks from the mother as they are hatched, but we are not of that opinion; nature seems to be the best guide, as they generally keep under the mother, as animal warmth is, without doubt, infinitely more necessary to them than frost. Some say plunge them in cold water to strengthen them. Others say, make them swallow a whole pepper corn. Others again say, "give them a little ale, beer or wine," which we say is worse than nothing.

Here again our advice is to follow nature. Give them nothing; do nothing to them; let them be under the mother's wings at least twenty or twenty-four hours. There is no occasion for alarm if, for hours, they content themselves with the warmth of their parent, and enjoy her care. Yet some food must be provided for them, and this should be, of course, suited to their nature and appetite. Here again let the simplicity of nature be a guide. In their natural state the young are supplied with ants' eggs, grubs, etc.; in a domestic state they should be furnished with hard boiled eggs, chopped, but not too fine, curd, crumbs of bread soaked in milk, shreds of fat meat and liver boiled and minced are excellent things for them when quite young; as they grow older, fine hominy soaked in milk, lettuce, nettle-tops, if procurable, leeks and the green of onions are also excellent for them. Turkey chicks do not like their food to be minced much smaller than they can swallow; indolently preferring a meal at three or four mouthfuls than to trouble themselves with the incessant scratching in which chickens so much delight. But at any rate the quantity consumed costs little or nothing—the attention to supply it is everything.

After the young turkeys have remained under their mother's wings twenty or twenty-four hours, place them and their mother in a *roomy* coop or pen, in the sun on the grass. Some, if the weather be fine, tie a long piece of flannel list round one of her legs, and fastened to a stump or stake driven in the ground. But we prefer the coop or covered pen, which saves her ever watchful anxiety from the dread of enemies above, behind—the hawk, the rat, the weasel and the fox; and also protects herself—she will protect her young—from the sudden showers of summer.

The mother turkey should be fed abundantly after hatching, as well as before, "for though she does not give milk, she gives heat, and let it be observed that as no person ever yet saw healthy pigs with a poor sow, so no man ever saw healthy chickens with a poor hen." This is a matter much too little thought of in the rearing of poultry, but is a matter of the greatest consequence. Never let a poor hen set; feed the hen while setting, and feed her most abundantly when she has young ones, for then her labor is very great; she is making exertions of some sort or other during the whole time, in order to provide food or safety for her young ones.

When the turkey hen may be allowed her full liberty with her brood, depends so much on season, situation, etc., that it must be left to the exercise of those who have the care of them.

As damp or cold is fatal to turkey-chicks, so is intense sunshine; and hence they should not be led to pasture under a scorching sun, unless indeed care be taken that the lot is well shaded. Should a storm come, let them be housed at once. Turkey-chicks should not be suffered to stray too far, for, independently of the risk they incur in case of a sudden shower, it must be remembered that they are as yet incapable of encountering any great fatigue, and their condition will be anything but benefitted thereby.

It will always be recollected, in reckoning the advantages with the expense attendant on the rearing of these birds, that, until you want to fatten them, you need be at no particular pains relative to their food, after giving them their liberty, as they are quite able to provide for themselves. They are great insect hunters—turn them into a field infested with grasshoppers, and they will grow astonishingly. In thus readily providing for themselves, they are also greatly assisted by the easy character of their appetite—grass, herbs, cabbage, corn, berries, fruit, insects, tadpoles and reptiles.

We have now afforded all the information relative to the rearing of turkeys that we have been able to collect, and also all that our own experience enables us to add on our part.

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Hanging and Climbing Plants for Vases, &c.

There are many beautiful trailing or climbing plants which, suspended in baskets or vases in the plant room or parlor, make elegant ornaments.

Lobelia gracilis is one of the prettiest plants we know of for this purpose. When covered, as it will be when proper care has been taken of it, with its immense profusion of flowers of an elegant blue color, it must be confessed a charming ornament.

The Nierembergias are neat, beautiful plants for this purpose. The Torenia Asiatica is one of the most beautiful plants we know of, in a hanging basket.

Lysimachia Nummularia, a strictly hanging plant, is of the easiest culture and with its bright yellow flowers and very pretty foliage and graceful habit, should be a great favorite.

For climbing plants, the Maurandia is one of the best. Neat and elegant in foliage and with pretty fox-glove shaped flowers it is exceedingly well adapted for the plant room. Lophospermum scandens is also good. G. B. H.

Inquiries and Answers.

Black Knot—Salt.—A good many years ago, before those ugly black *knots* appeared generally on our plum trees, I read in a Philedelphia paper, under the head of agriculture, what was said to be a sure preventive of that disease. It was simply to pour very strong soap suds at the foot of the tree. Anxious to try it, I went immediately out, washed out the bottom of a large kettle that had been used in making soap, and applied the rinsings agreeably to directions at the foot of one tree. It was very strong, and I flattered myself if there was any virtue in the prescription, that tree at least was safe This was early in the spring. Before fall there was hardly a joint in that tree from which a gum did not ooze, and the next season it was literally covered with black knots. No other trees were affected in my garden until the next season. Did the soap suds probably hasten the disease? J. L. [Strong healthy trees usually withstand the disease best, and feeble ones are often most affected. The overdose of the soap, by injuring the growth, may have rendered the tree more susceptible--but probably it was merely accidental. A very little soap is good—a heavy overdose is poison.]

Another Fact.—In the same paper—one year ago last spring—I read an article on the cultivation of the quince. It recommended a liberal application of salt as a fertilizer—at least a quart under each bush. I had that spring set out two bushes where I did not care to have but one grow. Therefore, although I had not forgotten the apparent fatal effects of soap suds on plum trees, I hastened to apply about half a pint of salt to one of my quince bushes. In two weeks I discovered the leaves put on a yellow autumnal appearance, and before fall it was as "*dead as a nit.*" Did the salt kill it? J. L. *Clay, N. Y.* [Unquestionably. A smaller quantity, spread broadcast, would have done no harm.]

Size of Hog Apartments.—I desire to be informed what size I shall build my pig pens, to accommodate six hogs to the pen, when ready to kill—also the best manner to build, and the best manner to feed my pigs from the time they are weaned until fit to kill, at twelve or fifteen months, in order to get the most pork with the least feed E. G., JR. *Wis.* [Swine, while fattening, do not need much exercise. A skillful farmer informed us that he found it a matter of economy to cut grass or clover with a scythe and throw it into his piggery, rather than suffer the loss of flesh occasioned by their roaming the open field for it. The apartments should be large enough to admit of easy and thorough cleaning, as cleanliness is of great importance to success. Apartments three or four times as large as the animals will cover, if kept clean, will be ample; but the bed and feeding rooms, are best if separate. See the plan in second volume of *Rural Affairs*, p. 33, or in the *Register* for 1858. In large establishments it is found best to cook the food; but in one of the size our correspondent mentions, *grinding* alone, will answer, and it should never, if practicable, be omitted. Ground meal will do well if given dry—with only so much water as the animal will drink besides, or still better, clear undiluted sour milk, all that can be given. An animal will grow rapidly on sour milk alone, and fatten well with a little meal added. The worst kind of food is that which is highly diluted, as a thin slop; or milk with much water mixed; or very thin gruel; all of which load and distend the animal, without contributing much to its nourishment, and make big-bellied and lean pigs.]

Catarrh in Sheep.—Please tell me through your excellent journal, if there is any effectual remedy (if so, the ingredients,) for sheep that are troubled with a discharge at the nose. Tar is not very easy to apply at this season of the year. A Subscriber. [If the discharge is caused by catarrh or influenza, it will be important to keep the sheep warm and well sheltered. The treatment must vary with the symptoms, and it is difficult to give general directions. One case may be accompanied with costiveness, another with diarrhea. To promote expectoration when the disease is "tight," molasses and water may be given. Rubbing the legs and ears with red pepper is often useful, to induce circulation in cases of torpidity. But as a general rule shelter and good food, warm mashes, &c, will be best. Pine boughs are said to answer the same end as tar. Prevention, by avoiding exposure to cold winds or wet ground, is worth more than all cures.]

Spreading Manure in Winter.—Can you, or any of your correspondents, inform me as to the propriety of hauling manure during the winter from the stables, directly and daily, and distributing it on grass land, or on land to be plowed in spring for corn? If done, should it be spread or left in heaps until spring. C. R. P. *Belvidere, Ill.* [It may be drawn out and spread at once upon the land. At the first thaw, it settles down in contact with the soil, and the soluble parts are retained, and every successive rain washes it in. If the manure is perfectly fresh, and the soil quite clayey, it may be best to leave it in heaps long enough to cause partial fermentation before spreading]

To Prevent Manure from Burning.—In answer to an inquiry, I would say that I think the proper way to prevent manure from becoming fired, would be to strew shelled corn over it and turn in hogs once a month to stir the mass. I. D.

Spavin.—What will check a *bone spavin* or cure it, when it first makes its appearance? A Subscriber. [The best remedy for spavin, taken at the first symptoms, is *rest.* Turn the animal out to grass, if in summer, or give him a stable with a soft floor, or a warm yard, if in winter. A cooling lotion may abate any inflammation; and may be made by mixing alcohol, vinegar, and common salt, and applying it by means of a broad flat sponge, occasionally dipped into the liquid, and drawn around by a broad strip of tape sewed to it. Prevention is always better than cure; and be sure never to breed from a diseased animal, and be careful never to strain the limbs of a young animal by hard work.]

Swine.—Can you tell me where I can get pure bred Essex, Chester white and Berkshire pigs? S. L. *Chatham, C. W.* [You can get the Essex of C. S. Wainwright, Rhinebeck, Duchess Co., N. Y.—the Chester of T. Wood, Penningtonville, Chester Co., Pa., and the Berkshire of Thomas Gould, Aurora, Cayuga Co, N. Y.]

Water Pipes.—Can water be brought down a slope, say grade ten inches to the rod, in hard burned tile, plastered at the joints with water lime? Is it as good as water lime pipe? The water is to be used at the house and barn. What is considered the cheapest and best? With water lime pipe, if it gets stopped up you cannot tell easily where it is, with tile, if it gets clogged, I should think the water would force its way to the surface through the tile. William Rhodes. [Water may be brought in tile as mentioned, if there is a gradual and regular descent, and no pressure or head. Or the pipes might be imbedded in clay, of the consistency of brick clay. If any pressure is given, the tile should be wholly bedded in water lime mortar three-fourths of an inch thick—when well hardened, it will bear several feet. We do not think the water would ooze through the sides of the tile sufficiently to mark a place of obstruction, at the surface of the ground; but might doubtless through fissures. Tile, encased in water lime, is probably the cheapest, where the head is moderate.]

Special Notice.—The inquiries of L. B. W., Athens, Vt., as well as those from numerous other correspondents, induce us to say—1. That while we should be glad to serve all our friends, it is utterly impossible for us to reply to inquiries by letter.—2. That all letters as to prices, and transportation of stock, implements, &c., should be addressed to the breeders of such stock, or the dealers in the articles wanted, for a list of whom reference can at any time be made to our advertising columns. And we may also add, 3. That answers to inquiries, which involve the recommendation from interested parties of any article publicly offered for sale, should come in the form of Advertisements, and be accompanied by a remittance accordingly.

Grinding Grain for Sheep.—Can you tell me whether any reliable experiments have been instituted to prove that it is economical to grind grain for sheep, giving one-tenth for toll? A good many here think that it does not pay to grind grain for sheep, as they masticate whatever they eat so thoroughly and digest it completely. J. W. S. *Portage Co., Ohio.* [We know of no decisive experiments. Will some of our sheep farmers state any positive knowledge they have on the subject.]

Disease in a Steer.—We have a steer that has been disordered very bad about two months—at first with swelling at the mouth, but that has left, and still a great difficulty in trying to eat; he has lost flesh very fast, until he can hardly walk about. Can you tell me what is the complaint, and what would cure? J. S. *Lewis Co., Va.* [It is somewhat difficult to know the disease without more of the symptoms. It may be the *thrush*—for which Dr. Dadd recommends the application with a swab or sponge, at first, of a mixture of 2 ounces of golden seal and one ounce of tincture of Matico,* with 4 ounces of honey. In cases of longer standing, affecting the whole alimentary canal, and usually causing purging, he recommends 2 drachms each of sulphur and golden seal, and 4 drachms of Matico, mixed with a pint of water, and given to the animal. We have no doubt that a solution of chlorate of potash would be excellent, especially in the early part of the disease, say an ounce in a half gallon of water, a half pint or less given at a time; and that where Matico cannot be had, an infusion of slippery elm bark would be useful. Raspberry leaves are good, but cannot be had at this time of the year.]

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* A plant from Peru, a carminative stomachic.

Cisterns for Cattle.—Is rain water from cisterns good for cattle? It is a tedious operation for us to draw water from a well 25 feet deep, for 20 head of cattle. If they will relish it we should not have to raise it so high for them. Young Farmer. [Rain water is good for cattle, and they will drink it readily when accustomed to it. Cisterns stirred freely by use, will not become much foul.]

Sun's Declination.—A correspondent asks the meaning of the term "Sun's declination," in the last number of the Register. It is the distance north or south of the equinoctial, a circle in the sky corresponding with the equator on the earth. At the time of the equinoxes, the sun, being on this line or circle, has no declination. It is the same thing as applied to the heavenly bodies, as latitude to objects on the earth. (The term *latitude* as applied to heavenly bodies, is quite a different thing.) These terms are explained in elementary works on astronomy.

Egg Plant, &c.—Although ashamed to confess my ignorance, I would like an answer to the following queries. 1st. What is the egg plant, how is it cultivated, and how is it used afterwards? 2d. Is there such a thing known as "the beefsteak plant," and if there is, what is it, and how is it cultivated and used? Inquirer. [The egg plant is a vegetable of the Solanum tribe, and bears a large fleshy fruit, which is usually fried in thin slices, but sometimes stewed or used in soups. The seeds are sown in an early hot-bed, and when two or three inches high transplanted into another hot-bed. When the weather becomes warm they are set out in rich open ground, where they are kept well cultivated. They will be fit to use from the middle to the end of summer. We must call on some of our correspondents to explain what the beafsteak plant is.]

"Beef Steak Plant" is Begonia Evansiana—a very old and very ornamental plant, but of no culinary use. t. m.

Salt and Nitre as Manure.—I have noticed several articles in your paper from the pen of Mr. Johnston, (the best writer on agriculture I ever read,) on the subject of wheat, in several of which he recommends salt to be sown in the spring or fall. Now what I wish to know is if Mr. J. thinks a little saltpetre in the the salt would do any harm. I can buy salt that has been used by pork men in Louisville for 60 cents per barrel, which has a very small proportion of saltpetre in it; and also some blood. w. w. l. *Kentucky.* [Saltpetre is regarded as a powerful manure, but has never been much tested, on account of its high price. On light soils it is said to have produced decided results when not applied at a heavier rate than 50 or 100 pounds per acre. We have no doubt that the salt spoken of by our correspondent will be none the less valuable for the mixture it contains.]

Asparagus Plants.—*A. P.* The price of Asparagus plants, two years old, at most nurseries is, we believe, $1 per 100.

Fattening Swine.—Is it cheaper to avoid winter feeding and kill pigs at 9 or 10 months old, feeding in a pushing way while they live, as *some* of your correspondents recommend, or to keep in growing condition on grass, slops, grain and potato field gleanings, and corn in default of these, till 15 or 18 months old, and then push with corn and pumpkins for the final fattening. In the west we deem the latter the cheaper? t. b. *Kentucky.* [This is an interesting question, worthy of further investigation. We are not aware that fully reliable experiments have been made on the subject, although many farmers have made up their minds entirely to their own satisfaction, from guessing. Decisions may be made apparently on good and sufficient grounds, and yet prove erroneous. There are so many causes for success on one hand and failure on the other, that all circumstances need to be carefully taken into consideration. For instance, one farmer may have a breed that takes on flesh freely, like the Berkshires; he may feed regularly, prepare his food well, preserve comfort, cleanliness, &c, and make three times as much pork out of the same food, as his careless, irregular, slip-shod neighbor, who feeds lankpikes only. It would make but little difference whether the former selected young or old swine for feeding, so far as the decision against the system of his careless neighbor was concerned. We would like the opinions of skillful farmers—and if fortified by weighing, measuring, &c., all the better.]

Poultry.—What variety of chickens are the most hardy and productive, and how can I cure a diarrhoa that is fatal among them? a. s. m. [There are so many varieties of chickens of nearly equal hardiness and productiveness, that it would be a difficult matter to decide as to the best. Mr. Bement, in his Poulterer's Companion, recommends the following treatment for diarrhea: "The treatment is simple, and of course depends upon the cause. When the disease is brought on by a diet of green or soft food, the diet must be changed and water given sparingly. Five grains of powdered chalk, the same quantity of rhubarb, and three of Cayenne pepper, may be administered; and if the relaxation is not speedily checked, a grain of opium and one of powdered ipecacuanha, may be given every four or six hours. Dr. Bennet recommends, "when it arises from undue acidity, chalk mixed with meal; but rice flour boluses are most to be depended upon."]

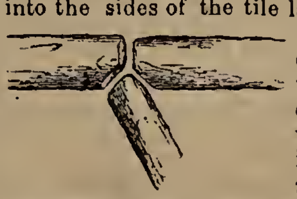
Sanford's Farm Mill.—In answer to an inquiry in your paper of Dec. 27, I have to say that I put in my saw mill one of Sanford's largest mills, and have ground about 800 bushels without one cent repair. The mill works to a charm. The shaft must be kept oiled. Said mill was bought of R. L. Howard, Buffalo. E. N. Thomas. *Wayne Co., N. Y.*

Sowing Plaster, &c.—Permit me to say, in answer to an inquiry in the Co. Gent. of Dec. 27, that Mr. S. P. Hubbell, Unadilla, Otsego county, N. Y., has patented a machine for sowing plaster, lime, guano, &c., as well as grain of all kinds, which is highly spoken of by those who have used it in this section. It received the first prize at the last New-York State Fair, and also at several County Fairs. It costs $40.
Otsego County. A. B.

Plaster on Wheat, Barley, &c.—I would like to ask you through the columns of your paper, or some of your correspondents, the following questions:—1. What will be the effect of sowing plaster on wheat in the fall, soon after it is sown—say about the time it begins to come up?—2. What will be the effect of sowing plaster on barley at about the same period of its growth in the spring?—3. In the common practice of sowing plaster, does it benefit the wheat or the clover only? j. a. c. *Oakfield, N. Y.* [We invite the observations of our correspondents. Plaster has mostly proved beneficial to wheat when sown in spring, but has done better by autumn application. We have no knowledge of the results when used on barley. Its greatest and most striking effect is on clover.]

Questions.—1. Can any of your readers give the rule for *framing* braces—for example, a brace 3 feet long, where must the mortices be in the post and beam? 2. What is the rule for finding the number of square feet in saw-logs? 3. Which pays best, to burn your wood into coal, or to sell by the cord when you can get $2 per cord for wood and $6 per 100 for coal? 4. What will do to mix with night soil to prevent the effluvia from arising, and what way pays best to use it? 5. Would cement placed around fence posts prevent their decaying? 6. Does not manure pay better on wheat ground than on corn? 7. Is it best to give colts a little oats the first winter? j. t. h.

Draining.—I wish to get some information in regard to ditching, through your columns. In ditching last fall, I laid a tile drain across the lower end of an old stone drain. I put in three inch tile, which I thought sufficient to carry off the water, but there seems to be a difficulty in so much water getting through the joints of the tile, and therefore it rises to the top. I would like to get information from John Johnston or some one who has had experience in this matter, as I can find nothing in anything I have read yet to enlighten me on the subject. Also I wish to know how to fix the upper end of a drain made to carry off a large pond, so that the dirt will not wash in and fill up the tile. E. Scribner. *Clinton Co., N. Y.* [We are unable, from the description of the difficulty given, to understand exactly its nature. Does the water *pass out* through the joints somewhere below the place of its entrance? If so, then the descent is either insufficient at that spot, or there is obstruction below. If the water rises to the surface after it discharges from the stone drain and because it cannot get into the tile, then openings must be made into the sides of the tile large enough for this purpose, as is always done where a common tile enters a main drain, as shown in the annexed figure. To prevent sediment entering a pipe, make a well or cistern; let the water run into it and out again into *the* pipe *near the top*, which allows all the sediment to fall to the bottom. Gravel or fine stones alone will sometimes do.]



[For the Country Gentleman and Cultivator.]

Some Good Things---with a Reason.

MESSRS. EDS.—It is a good thing for every one who owns or occupies forty rods of ground, to take an agricultural paper—one that gives the most practical and reliable information—for it often happens that a hint or suggestion received, is worth more than the paper costs.

It is a good thing to preserve the papers, and at the end of the year, either have them bound or stitch them together—for they are often useful to refer to.

It is a good thing for those who write for such papers, to use plain intelligible language—for many of their readers may not understand Greek.

It is a good thing when one has a hobby, not to ride it too hard—for it may wear out before others are ready to take a passage.

It is a good thing for those who are inclined to try experiments, or to adopt some new theory, to move cautiously—for the world is full of humbugs.

It is a good thing for a man to oversee all his work, especially attend to the details—for PAT is very apt to slip over many things that should be done.

It is a good thing to be neat and tidy about one's premises—for it is pleasing to the eye, and is desirable every way.

It is a good thing to be neat and tidy about the barn—to have the stables kept clean and the cattle mangers cleaned of orts at least twice a day—for this will add much to their health and comfort.

It is a good thing to see that fodder is not scattered about under foot—for cattle do not relish their food after it has been trodden upon with dirty feet; much is often wasted in this way.

It is a good thing to let cattle have access to water twice a day—for if watered but once they are apt to drink too much, and thereby become chilled and uncomfortable.

It is a good thing to card cattle every day—for it promotes health and gives them a pleasing appearance, and it is a luxury they enjoy much.

It is a good thing to keep all animals thriving, or at least not suffer them to fall away in flesh during cold weather—for all they lose in flesh is a dead loss to the owner.

It is a good thing to furnish the hog-pen with a plenty of straw and litter—for grunter will manufacture it into the best of manure, besides, a warm nest will make him comfortable, therefore cause him to thrive.

It is a good thing to keep manure in snug piles—for it will leach less by the melting snow and rains.

It is a good thing to increase the manure heap in every possible way—for it will give a larger dividend than railroad or bank stock.

It is a good thing to draw out manure the latter part of winter, or early in the spring—before the frost is out of the ground—for it is easier done then than later, and it injures land to go on to it with a team when soft.

It is a good thing to keep farming tools in order, for it often saves great vexation and loss of time, when wanted for use.

It is a good thing to have a place for everything, and everything in its place, for it is trying to the flesh to be obliged to hunt for scattered tools.

It is a good thing to have a year's stock of wood at the door—sawed, split and seasoned—for it is bad economy, to say nothing of discomfort, to burn green wood.

It would be a good thing for those who practice burning green wood—drawing and cutting it as wanted—to let their wives wear the breeches—for quite likely they would be the most capable of managing affairs.

It is a good thing sometimes not to say all you have on your mind at once—lest a painful silence ensue—therefore, finally,

It is a good thing to "be subject unto the powers that be"—to love our country, and to live peaceably with all men—the reason is obvious. J. L. R. *Jeff. Co., N. Y.*

[For the Country Gentleman and Cultivator.]

MULCHING---SURFACE MANURING.

From the best experience and observation which has come to my knowledge, it is clearly evident that no one operation in farming is more advantageous than *surface-manuring*, or top-dressing—for almost all crops—while it is the cheapest mode of manuring.

First—for Meadows.—I had a small timothy meadow of about five acres, which had been mowed many years, until it would not produce one ton the acre, and so spindling it could hardly stand up before the scythe; but during early winter about half of it was spread over evenly with a liberal coating of barn-yard manure; this protected the roots of the grass during the freezing and heaving, and bleak winds of winter, so that wherever there was any cracking open or heaving of the ground by frost, the finest of the manure fell into them, not only protecting but enriching the grass; this is one benefit. Then, the spring thaws and rains drenched the manure and carried it into the soil, before the sun was hot enough to evaporate it much, which gives the grass a vigorous healthy start; this is the second benefit. Again, this *mulching* shelters and protects the young grass and roots, still later in the season, from the hot sun, before the grass is grown enough to shade itself, and this is a third benefit to the meadows—while there are still others, such as keeping the land mellow, moist and loose during the season.

Second—for Corn and Potatoes.—Let the ground be covered with a good liberal coating of half or full-rotted manure, either before planting or after the crop is fairly up, and the ground will be kept mellow and moist—never suffering from drouth—and the weeds will be kept down, so that hoeing and cultivating can be dispensed with—while the time required to do this mulching well and carefully, will be less than that to hoe and dress it well; then the manure will be finely and gradually drenched to the roots by the occasional rains, in about such quantities as will handsomely stimulate and nourish the plant, continually, to a vigorous growth; while this manure will not begin to evaporate enough to be wasted, before the crop will have grown sufficiently that the leaves will absorb and profit largely by this escape of ammonia from the manure; for the successful fruiting of crops need to appropriate liberal supplies of ammonia and other gases, more by their leaves above ground than by the roots below—it being more their office to seek and take up the requisite minerals. At least such has been my experience, having invariably obtained the best yields of corn, potatoes and grass from lands thus mulched or manured, and that, too, where the corn and potatoes were not hoed or cultivated at all after planting; while I have never known a corn or potato, or grass field thus treated, to suffer in the least from drouth, even in the driest seasons, as it not only prevents the escape of the moisture already in the earth, but also absorbs and retains the dews and mists of night. These are no vague notions, but well settled facts. Not only will time be saved and the labor be made easier by faithfully and extensively practicing this top-dressing, but larger and more certain yields of crops will result from it, *and the soils remain longer in tilth.*

Third, for Wheat.—These beneficial results will be equally certain and liberal in the raising of wheat, particulaly if winter wheat be sown—and winter-killing will be almost totally prevented thereby. Let the manure be spread as soon as the ground is frozen; then if the ground is likely to crack by freezing, the manure fills in and protects the roots; nor can the winds dry and drift the soil—laying bare the roots—as in the case of our prairies more particularly. D. S. C. *Madison, Wis.*

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☞ Mr. THOS. WOOD of Penningtonville, Pa., whose advertisement of Chester County Pigs appears in another column, informs us that a pig of the Chester Co. breed sold by him to Patterson Moore of Western Pennsylvania, two years since, was recently killed, and the dressed weight was 990 lbs., as he is informed by Mr. Moore.

THE CULTIVATOR.

ALBNAY, N. Y., FEBRUARY, 1861.

The Yale Agricultural Lectures.—As we go to press, we learn from Prof. Porter, that apprehending the effect of the present state of the country in diminishing the interest and usefulness of an agricultural convention, it has been decided to *postpone a repetition* of the "Yale Agricultural Lectures" to another year. The regular lectures of the Scientific School on Agricultural Chemistry and the general principles of Agriculture, will be given as usual, commencing Feb. 1st.

Notices of Implements and Machines.—In order to prevent misunderstanding on the part of some, we distinctly state that none of the notices which appear in this paper, recommending new implements or machines, are inserted for compensation. They are invariably made from actual observation or personal trial, or from careful examination on the part of the editors. We have made many trials of this kind, attended with considerable labor and trouble; and manufacturers in order to facilitate such experiments, have freely furnished the implements. But we have always accepted them for this purpose, with the express understanding that we should report honestly and faithfully to our many thousands of readers, our opinion of the value of each; and if any did not promise to be worthy of commendation, no sum could induce us so to impose upon our readers as to attempt to induce them to purchase what we believed would result in disappointment. At the same time, it always gives us pleasure to assist the progress of what will obviously prove of value to farmers; and if manufacturers will furnish us, we shall in future endeavor to give the public a faithful and impartial report.

☞ In another Note we have given some figures to show how large a business the Farming of the West creates for the city of Chicago. The Albany Evening Journal has compiled a table exhibiting the Commerce of the Erie and Champlain Canals of this State during the season of 1860—giving the total quantity and value of every article coming down through the channel of these important Public Works to tide water at the Hudson River. We should be glad to publish the table at length if our limits would permit, but a more condensed statement will suffice to give an idea of the amount of Agricultural Produce that seeks a market in this way, and of the amount of business it must create for other classes in the community after it leaves the Farmer's hands.

Classed under the distinctive head of Agriculture, we have

Product of Animals,	$2,766,604
Vegetable Food,	48,183,034
Other Agricultural Products,	284,240
Total value,	$51,233,878
To which may be added, Live Cattle, Hogs and Sheep,	216,865
	$51,450,743

Of this aggregate, some of the larger items are worth specifying in round numbers. Among "Products of Animals," there is over a million dollars worth of Cheese, nearly half-a-million of Butter, and almost a million of Wool—the other items being barrelled Beef and Pork, Bacon, Lard and Tallow, and Hides. In the list of "Vegetable Food" we have about twenty-two millions of dollars in Wheat, and seven millions more in Flour; twelve millions and a half in Indian Corn; two millions and a quarter in Barley, and two and three-quarters in Oats—the other items consisting of about $400,000 worth of Potatoes, and still smaller amounts in Rye, Bran, and Peas and Beans. The "other agricultural products" include about $132,000 in Hops, and the remainder in small amounts of Tobacco, Hemp, Cotton and Seeds.

For purposes of comparison with the foregoing, we may add that the *Forest* contributed $11,580,117 to the Commerce of the Canals, mostly in Boards, Scantling and Staves; *Manufactures*, $5,321,367, in which the largest items are over two millions for Leather, and a little short of two millions more for Pig, Bloom and Bar Iron; *Merchandize* $4,653,345, and articles not classified about seven millions and a half—making a grand aggregate of $80,458,585—of which as we have seen the toil of the Farmer creates more than *five-eighths*, aside from whatever share he has had in the original production of many of the Articles here classed as Manufactures or Merchandize.

☞ As our readers are already aware, Mr. Rarey, of Horse-Taming celebrity, has returned to this country. He gave three exhibitions at New-York last week which were largely attended, and, judging from the published reports, appear to have given general satisfaction. We have not the space at present to copy an account of his proceedings—but one remark which he is quoted as having made, illustrates so concisely his great aim in the management of the Horse and the true theory of accomplishing it, that it may be borne in mind with profit by every farmer who has a colt to raise: Mr. Rarey said that "a horse has no natural vices, but simply those he learns from man in the process of breaking. He does not know his strength until he has gained an advantage over us in a contest for supremacy; but, once learned, he never forgets it. Hence our "breaking" should be such that we have control from the beginning, and never lose it. A young colt should never be rudely approached in the pasture, but he should be suffered to come to us, feel our person, and gain confidence; and this much gained, our whole management should be gentle, deliberate, and perfectly planned."

☞ The Chicago Tribune publishes a tabular statement of the exports of that city in flour, grain and provisions, and other leading country products, during 1860. The gross amount as compared with the two preceding years is as follows:

Total value in 1860,	$33,737,489.88
Total value in 1859,	24,280,890.47
Total value in 1858,	19,928,495.83

Among the items making up this total of nearly thirty-four million dollars, the largest are worth quoting:

			Value.
Wheat,	bushels,	12,487,684	$10,864,285
Flour,	barrels,	713,339	3,210,025
Corn,	bushels.	13,743,172	6,184,427
Oats, Rye, Barley and Seeds,	bushels,	1,576,984	834,756
Live Hogs,	number,	133,612	1,603,344
Dressed Hogs and Pork,			1,633,760
Beef Cattle,	number,	104,122	3,123,660
Beef and other "Cut Meats,"			1,914,932
Lard,	pounds,	9,150,899	1,006,598
Hides,	pounds,	11,609,345	1,160,934

Add to these not quite half a million in "High Wines" and Alcohol, about two hundred thousand dollars each of Broom Corn and Butter, three hundred thousand each of Tallow and Wool, and we begin to understand how Agriculture can make Cities grow! The only item in the whole table for which Farmers are not directly responsible is $600,000 worth of Lead. But it should be added, according to the same paper, that a considerable export trade, under the general head of "Merchandise," is not included in the foregoing exhibit. The excessively high rates of freight, also, are said to have reduced the aggregate about one-sixth.

Old Corn for Pork-Making.—J. M. Conner, in the New-Hampshire Journal of Agriculture, gives some valuable hints on fattening swine, from which we clip a single paragraph: "The practice of late fatting and feed on soft corn is a ruinous one. Every farmer should manage so as to keep a year's stock of corn on hand, so as to make all his pork from old corn. It is worth from 15 to 25 per cent. more than corn just harvested. Hogs should not be kept half-starved through the latter part of summer, waiting for the new crop as is frequently the case."

Effect of a Clay Soil on Wool.—In an extended notice of the sheep farm of Dan'l Kelly, Jr., of Wheaton, Ill., the remark is made that Mr. K. after traveling extensively, "selected this locality because of its elevation, its capacity for thorough drainage, and because it was apparent to him that a good thick, compact sward could be obtained." The soil is a black prairie soil with a clay subsoil. This was also considered. He not only does not want sheep on a *bare* soil, but thinks a clay land which bakes is not a good soil for keeping blooded sheep. It absorbs the oil. He would not let them lie on a clay soil even though feeding them on such land.

☞ "The friends of agriculture in New-York, will recollect that the annual meeting of the State Agricultural Society will be held at Albany on the 2d Wednesday of February next."

— So, we find on turning to an old volume of the Cultivator, we wrote just *twenty years ago* the present month, and the notice may be quoted *verbatim*, at this time. "The interests of agriculture," we continued, "demand a full and explicit expression of the will of the great mass of farmers in the State; * * * New-York can, if she will, have a State Society second to no Agricultural Society in the world; let the meeting of February demonstrate that she both can and will."

It is interesting thus to revert occasionally to the past, and place the expression of recorded hopes, side by side with the event as since developed, wholly or in part, by the hand of Time. The position now occupied by our State Society, we may best leave for others to judge; but it is not improper to venture a single wish, based upon the foregoing remarks as uttered a score of years ago—and this wish is that "the great mass of farmers in the State," *would* individually show a still greater interest in its proceedings and welfare,—by attending in larger numbers its Winter Meeting, by still more general competition for its prizes, by regarding its exhibitions rather in the light of the useful lessons they convey, than in that of the recreation they may be made to yield. All parts of the State should feel an equal pride in its successes, and take an equal interest in its management,—as they should also share, as equally as we trust they do, in the benefits it confers.

☞ After visiting the district of Massachusetts, infected with Pleuro-Pneumonia, in June last, and obtaining there and from other sources what information we could upon the subject, we gave in the Country Gentleman (vol. xv, p. 400,) the conclusions to which we were led; and, after their appearance, and the publication shortly afterward of similar views on the part of the Executive Board of our State Agricultural Society upon the character of the Disease,—comparatively little more was heard of it in public—except perhaps an occasional prophecy of its re-appearance with the return of cold weather, an event which has not occurred, and which never seemed to us in the slightest degree probable.

The Report of the Massachusetts Commissioners has now appeared, and in default of a complete copy of it, we have read with interest an abstract published in the last N. E. Farmer. It does not seem—judging from this abstract—to go beyond the points set forth in our own conclusions, the correctness of which it confirms—except in pronouncing the disease "always" and "hopelessly incurable," a position which may or may not be fully established.

Our object, however, in now referring to the subject, was mainly to point out what immensely exaggerated ideas of the prevalence of the disease were disseminated throughout the country—not only creating unnecessary alarm and therefore matter of regret, but absolutely reducing the value of common neat stock and obstructing the sale of improved, well-bred animals to a remarkable extent—thus touching the pockets both of farmers and breeders in almost every part of the country, and impeding by just so much the course of trade and the improvement of our herds. The Commissioners, it seems altogether—in the several months during which they were actively occupied, killed 892 head, to which are to be added 5 head killed by medical examiners—total 897. Out of this number *less than two hundred head were pronounced diseased,* (188,) while the other *four-fifths*, or thereabouts, were pronounced entirely sound and healthy!

The question will arise in other States whether our Massachusetts friends were not "more scared than hurt," and yet we cannot but feel, as we have said before, the same indebtedness to her State authorities for their public-spirited action, that would have been due to them if the foundation for popular apprehension had really been greater than it was.

Prices of Horses in England.—Among the more important Fairs for the sale of live Stock so common in Great Britain is the great Horse Fair regularly held at York the week before Christmas. From the report of sales at this Fair, the present season, it appears that foreign dealers and gentlemen avail themselves of the occasion as well as those from distant parts of the United Kingdom. An officer of the Royal Artillery was present during the week, making purchases for the army. Mr. Vandelin, a foreign dealer, also possessed an extensive commission, and he secured eight fine stallions for exportation to Italy. He also purchased other classes of animals for a similar purpose. Hunters were disposed of at prices varying from £100 to £400, the latter figure for "horses of celebrity and up to heavy weight." Horses described as well-bred upstanding young horses, with great action, suitable for private carriage purposes; selections of match colts, of good fashion, and grays or bays; and active, light stepping horses, adapted for brougham or light carriage work," are all priced at from £70 to £100; useful, fast-going animals, for single harness, £40 to £50; thick-set, short-jointed young horses, for hackney work, £26 to £30; well-framed, powerful, light-legged young horses, for van or railway work, £30 to £40; cover hack and roadsters, £30 to £40; well-bred galloways, £10 to £20; neat-going, compact-built cobs, £40 to £50; weight-carrying, handsome cobs, £60 to £70; neat young ponies, £10 to £20; ditto, well-matched pairs, £15 to £25 each; well-timbered, active young cart horses, suitable for London work, £20 to £40, according to merit. Matched teams of fast-walking young horses, £25 to £48; useful seasoned horses, for agriculture purposes and machine work, £28 to £37; two-year-old cart horses, £15 to £20; yearlings, none shown; blood stock, none on offer; stallions, from £200 to £400.

☞ The neatest possible little ear of corn came to us in a letter the other day from our friend M. W. Philips, Esq., of the far off State of Mississippi. It is 12-rowed, a fraction over 3½ inches long, and about three-quarters of an inch in its largest diameter. A hasty computation shows that its purple kernels must be nearly 500 in number, and, cob and all, it weighs a plump half ounce. Mr. Philips calls it "Brazilian Pop-corn," and informs us that his crop of it this year consisted of only 29 stalks—that these stalks however produced *two hundred and fifty ears* in a season excessively dry, and that on one stalk alone there were no less than *twenty-five* ears. It is the *prettiest* thing of its kind we have seen, and shall have a trial when the summer comes.

☞ The Young Farmer's Manual, by S. Edwards Todd, was accidentally advertised in our columns at $1. The Publisher's price is *One Dollar and a quarter.* We have borne the consequences of our error in filling orders hitherto received at the price thus erroneously given, but those sending for the book hereafter will please bear in mind that the price is $1.25, for which amount we will send it postpaid.

How to Elevate Farmers and Farming.—A gentleman in sending us a club of subscribers from New-Hampshire, remarks—"I have for many years thought that the best way to make farmers and farming respectable, and bring them up to the position they should occupy, is to circulate agricultural papers and publications of a high moral tone. Yours I think are the best published—for that reason I am willing to do mission work for them."

Condensed Correspondence.

Long vs. Fine Wooled Sheep.—I have just read an article in "Ohio Ag. Report for 1859," in which the writer claims the superiority of coarse wooled sheep over fine wool in many respects, some as follows—will live on coarser food—need less care and less protection from the storms of winter—will raise more lambs and have them drop earlier—far less liable to be injured by dogs, because less timid—can be kept profitably on high priced land, while fine wools cannot, &c. Are these things so? Will some one who has had experience answer. H. C. *Ohio.*

Garnet Chili Potato.—Of 58 varieties of potatoes cultivated the past year, the *Garnets* excel in all the desirable qualities of a potato—productiveness, hardiness and quality. A new seedling from Rev. C. E. Goodrich, called the "Central City," yielded remarkably, and bids fair to take the lead of the white varieties, as the Garnet does of the colored. C. W. G. *Holden, Mass.*

China Pigs.—The inquirer for China Pigs does not mention which variety he wants. I have the pure bred China pig from a direct importation. They are black—no hair—very plump—large flabby ears, short head and snout—head all full of wrinkles down to nose, and very prolific—will breed at three to four months old—don't exceed over 250 lbs., but excellent family pork. There is also a White China pig with short pricked up ears—they are very small. Charles Hughes. *Three Rivers, C. E.*

A Suggestion.—A specification of the work to be done, and the manner in which it should be done, together with the form of contract, &c., if it accompanied any one of your plans of houses, would enable any of us back country folks to draw up an agreement properly when we wished to let work by the job. There was a very nice little work published in England, in numbers, containing two plans each of houses, with ground plans, elevations, sections and details, specifications, form of contract, and everything necessary to put into the hands of the carpenter, that he may do his work completely. My memory, however, has failed me, and I cannot give the name of it.

Shipton, C. E. RUSTICUS.

Ag. Reading for Boys.—My father took the Albany Cultivator for the year 1842. In the winter, a year or two afterwards, while yet a boy, I read the whole volume through by wrote. Papers were very scarce in our country at that time. Had they been plenty as now, I would not probably have read the Cultivator so thoroughly as I did. That reading had a great influence on my mind. It gave a taste for agricultural literature, which has ever been strong and increasing since that time, and which I would not be without for much money. J. M. H.

The Country Gentleman.—A few days since, while in the store of my old employers in Boston, a young man, who was a fellow salesman twelve years since, asked me, "What is the best Agricultural Paper for me to take?" I unhesitatingly replied the Country Gentleman. If he derives as much benefit from the Gentleman as I have done, he will find it the best investment he ever made.

I have noticed in your paper, various methods of preserving the numbers for future reference. I will give my own, which if it is not so economical, is more convenient than some others. As soon as I have read them, I lay them carefully away, smoothing out the folds, and place a bound volume upon them to keep them in shape. At the close of a volume, take them to the binders and get a good strong paper (board) cover, with leather back and corners, properly labeled and numbered, for which I pay 50 cents, or one dollar a year, giving me two handsome books for $3, worth at least double any $3 publication with which I am acquainted." C. W. G. *Holden, Mass.*

☞ I think the Country Gentleman the best agricultural paper with which I am acquainted. D. M. N.

Time for Reading. — An Onondaga correspondent writes to the Co. Gentleman as follow:—"I have been unsuccessful in adding to your subscription list in this neighborhood. Some *disbelieve* in book farming, and others say they have *no time to read.* So the world goes. With the help of two sons I take care of 50 head of cattle, 6 horses, 70 sheep, 19 swine, and lots of poultry, and keep a team at work daily in drawing logs and wood. Besides this, I take the Daily Globe, Daily Standard, Semi-Weekly Tribune, Onondaga Gazette, Philadelphia Post, Harper's Magazine, New-York Mercury, Country Gentleman, American Agriculturist, and Genesee Farmer, and find time to read them all except the Post and Mercury—those belong to the younger members of the family. This pretence of having no time to read is, to say the least, merely a subterfuge. Every person who wishes to improve his mind, can surely find abundance of time these long nights, to read several monthly papers, and weekly ones too. However

> "Convince a man against his will,
> And he'll be of the same opinion still."

Therefore there is but little use in arguing the matter with such people. J. L.

Proceedings of Societies.

United States.—The United States Agricultural Society last week elected William B. Hubbard of Columbus, Ohio, President; Vice Presidents from all the States and Territories; B. Perley Poore, Secretary, and B. B. French, Treasurer. It is stated that a report was approved deprecating the practice of holding exhibitions in different sections of the country, and resolutions were adopted recommending the establishment of a Department of Agriculture by the Government.

Vermont State.—At the annual meeting the Vermont State Agricultural Society, held at Rutland on the 10th inst., the following gentlemen were elected officers for the ensuing year:

President—H. H. Baxter of Rutland.

Vice Presidents—Edwin Hammond of Middlebury; Henry Keyes of Newbury; J. W. Colburn of Springfield; John Jackson of Brandon.

Recording Secretary—Charles Cummings of Brattleboro.

Corresponding Secretary—Daniel Needham of Hartford.

Treasurer—J. W. Colburn of Springfield.

Additional Directors—Frederick Holbrook of Brattleboro; L. B. Platt of Colchester; David Hill of Bridport; H. S. Morse of Shelburne; D. R. Potter of St. Albans; G. B. Bush of Shoreham; Elijah Cleaveland of Coventry; H. G. Root of Bennington; Nathan Cushing of Woodstock; John Gregory of Northfield; George Campbell of Westminster.

The Treasurer's report was read and accepted, showing a balance in the hands of the Treasurer of $3,635.08.

The N. H. State Agricultural Society elected at its annual meeting on the 26th ult., the following board of officers:—

President—W. F. Estes, Dover.

Secretary—A. Young, Dover.

Treasurer—F. Smyth, Manchester.

Directors—J. S. Walker, Claremont; A. Hoitt, Durham; J. Preston, New Ipswich; W. Harriman, Warner, and N. S. Berry, Hebron.

The annual report represents the Society in a good financial condition.

The Connecticut State Agricultural Society held its 9th annual meeting at New-Haven, in the new hall of the Scientific School. After the reading of the usual reports, officers were elected for the ensuing year as follows:

President—E. H. Hyde, Stafford.

Vice-Presidents at large.—R. Battell, Norfolk, and John T. Norton, Farmington.

Directors at Large.—Chas. F. Pond, Hartford Co.; Randolph Linsley, New-Haven Co.; James A. Bill, New-London Co.; Geo. Osborn, Fairfield Co.: Benj. Sumner, Windham Co.; Abijah Catlin, Litchfield Co.; Levi Coe, Middlesex Co.; R. B. Chamberlain, Tolland county.

Cor. Secretary—H. A. Dyer, Hartford.

Rec. Secretary—T. S. Gold, West Cornwall.

Treasurer--F. A. Brown, Hartford.

Chemist—S. W. Johnson, New-Haven.

After a long discussion, says the Homestead, it was voted to hold a fair, if an appropriation should be made by the legislature, to obtain which a committee was appointed.

Massachusetts Board of Agriculture.—This body met at Boston on the 12th ult. Reports of delegates who had attended the exhibitions of Agricultural Societies were read. Among the proceedings we note that Mr. Grinnell submitted an elaborate report on Sheep Husbandry, and Mr. Atwater one upon Root Crops, which was discussed at length. The next meeting of the Board will be held the 8th of January.

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Sept. 26—weow6tm3t.

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LAWTON BLACKBERRIES—A fine lot from Root Cuttings—$1 per dozen—$4 per 100.
Root Cuttings by mail, post-paid, 25 for $1. H. B. LUM,
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SHORT-HORNS.

I offer for sale two Duke of Oxford BULL CALVES, one of them got by the "Duke of Gloster," (11382,) the other by imported "Grand Duke of Oxford," (16184.)

Also several well bred Bull and Heifer Calves by the same sire.

I have also a few

JERSEY OR ALDERNEY

Cows and Heifers for sale. JAMES O. SHELDON,
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Increase the crop from one-third to one-half,

and will ripen the crop about two weeks earlier. A pamphlet with satisfactory evidence and full particulars, will be sent gratis to any one sending address to GRIFFING BRO. & CO.,
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THE CULTIVATOR.

THIRD] TO IMPROVE THE SOIL AND THE MIND. [SERIES.

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THE CULTIVATOR has been published twenty-seven years. A NEW SERIES was commenced in 1853, and the eight volumes for 1853, 4, 5, 6, 7, 8, 9 and 60, can be furnished, bound and post-paid, at $1.00 each.

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EDITORIAL CORRESPONDENCE.

Notes from the Chenango and Susquehanna Valleys.

Entitled, agriculturally, to a prominent rank among the "Highlands" of this State,—intersected by fertile valleys,—watered by pure and pleasant streams,—less accessible and less widely known, from the fact of a somewhat sequestered position, than many districts possessing fewer natural resources—that region which comprises the border townships in the counties of Chenango, Otsego, Delaware and Broome, and which is drained by the river Susquehanna and its numerous tributaries, has perhaps scarcely the credit her importance really deserves, in the eye of the public at large. As her primitive forests have been cleared away, and her lands more and more largely devoted to grazing, dairying, and in some degree to grain-growing, the absence of railway facilities of transport and communication, has not prevented, if it may have retarded, her progress in prosperity and wealth, nor quenched, if indeed it has really checked, the spirit of enterprise, improvement and public spirit; the stranger is hardly prepared to find, at intervals of ten or twelve miles in these valleys, remote as they seem from our great channels of trade and travel, neat and flourishing villages of from eight hundred to a thousand or more inhabitants, many of them with water-power enough for extensive manufactures, but hitherto almost solely dependent upon the agricultural production of the surrounding country. The first-class butter which is carried from here to the fastidious consumer at New-York will probably have been purchased by him from his grocer, under the pseudo stamp of "Orange County;" and he thus remains ignorant that he is indebted for the luxury he enjoys to the sweet grasses and well ordered dairies of Oxford or Bainbridge or Unadilla, instead of to those of the more widely famous "Goshen."

Although the winter is not the time to visit such a region of country to the best advantage, and notwithstanding other engagements prevented me from seeing much that I should like to have noticed, and compelled me to examine very hurriedly all that I saw—nevertheless the old habit of jotting down what notes I can, enables me to contribute a brief sketch of several very pleasant days among the Farmers of the different townships I have alluded to above; and I do this only with the understanding that our many friends to whom I was indebted for kind attentions, shall pardon the omissions and imperfections they cannot fail to discover in what I have to offer.

Binghamton, a place of eight or ten thousand people, is situated, as will be remembered, at the junction of the Chenango and Susquehanna rivers; and taking the railway extending thither from Syracuse, I left the train at Chenango Forks, about eleven miles above, and proceeded up the valley of the Chenango, exchanging the steam-whistle for the more musical jingling of the sleigh-bells. Entering thus the southwest corner of the county which this river has baptized with its own name, and passing for a considerable distance upon the very bank of the Chenango canal, our first views include an uneven upland whose rolling summits are several hundreds of feet above our road, the valley itself varying in width from something less than a mile to a still greater expanse of fertile flats—a fine farming country, in which the hills are now disputing with the alluvial plain for the preference in growing either grain or grass. At the village of *Greene*, centrally situated in the township of the same name, I had time only for a passing exchange of greetings with Dr. A. WILLARD, an old and active friend of the COUNTRY GENTLEMAN and CULTIVATOR, while if it had been possible to follow the bent of inclination I should have been glad to make the acquaintance there of many others—including, for instance, such farmers as GEO. JULIAND, who cuts I was told in the neighborhood of three hundred tons of hay, and whose long established experience and reputation as a judge and dealer in cattle enables him to carry on a business in this direction involving the purchase and sale of a drove of from one to two hundred head at intervals of from 10 to 20 days throughout the year.

From Greene we proceeded direct to Oxford, the drive from "the Forks" being in all about 22 miles, the sleighing excellent, although upon a very light fall of snow, and the day as bright and clear as possible, and quite as cold as could have been desired. At Oxford I first met HENRY BALCOM, with whom we have had a business correspondence extending over many years and involving on his part many kind exertions for our papers,—and Counsellor PACKER, ex-president of the County Agricultural Society—from whom and the officers of the Town Society, whose names were published in the Co. GENT. of Jan. 24, including the President, W. G. Sands, the Messrs. Bundy, Mr. Shattuck and others, I gathered much interesting information. The village has a spacious public hall, in which in the evening there was a good gathering of the farmers of the vicinity, whose questions, at the conclusion of the lecture, manifested a deep and intelligent interest in the improvement of our agriculture and the problems it involves.

These questions led me in turn to make various inquiries, during the conversation I subsequently had with Mr. Packer and others. It is thought that the permanent grass is here superior in quality on the hills, to that grown upon the flats, although the latter sometimes exceeds the former in quantity produced. Mr. P. mentioned as an example of grass land management, a meadow that was seeded down 22 years ago, top-dressed every alternate year with barnyard manure, carried out in heaps during winter and early spring, and spread as evenly as possible about first of May —say from ten to twenty not very heavy sled loads per acre—followed with a sprinkling of plaster, perhaps two cwt. per acre, which is in almost universal use and exerts the most beneficial effects. An average hay crop on land thus treated, year with year, is probably at least a ton and a half,—indeed it was thought that the best farmers would average fully 2 tons—the common custom being to cut one crop and feed off the aftermath, according to the season. The size of farms here will average perhaps a hundred and fifty acres, running from 80 up to 200, and in some cases, much larger ones; 150 acres will possibly keep, on the average, from 25 to 28 cows in milk, and the farmer will probably raise eight, ten or a dozen calves, and make a ton or two of pork. In former times considerable attention was paid here to fine wooled sheep, but the increasing importance of the butter manufacture has driven them out, and there are now comparatively few sheep of any kind retained. All southern Chenango makes butter very largely, the grain grown being chiefly oats and Indian corn, the latter ground for the cattle and for fattening the swine, while the former is also used for the horses and other stock. The general character of the soil is that of a clayey loam, but in the northern part of the county it is more sandy, and more grain is produced and cheese is more a staple than butter. It is becoming quite frequent for farmers to sow an acre or two of corn broadcast about the first of June, to cut for fall feed if required during August and September, or allowed to stand till frost comes and then cured for early winter use.

As to the product of good Dairy farms, Mr. John Shattuck, who resides just over the Norwich boundary line, was kind enough to give me the following statement with regard to the number of cows kept by him in 1860, and the amount and value of the butter made. It may be remembered that we published last year (see Co. Gent., vol. xv, p. 351) the statement of Mr. S. for the preceding season, accompanied with brief details of the manner of making, feeding, &c., and we trust Mr. S. will excuse us for reminding him here of his promise to let our readers hear from him occasionally hereafter upon dairy and other farming:—

THE DAIRY OF MR. JOHN SHATTUCK OF NORWICH.

Whole number, 30; of which 22 were full grown cows and 8 heifers; 7 two years old, and 1 three years old. They commenced dropping their calves the first of March, and the last one about the first of June. The cows were fed what good hay they would eat, and about one quart of corn-meal per day each, from the time they dropped their calves until they could get their living on grass; and this fall and winter they have been fed on cornstalks and hay. I sold four cows early in the fall, that I think would have made 100 lbs. butter to the present time.

Amount of butter sold, 5,378 lbs. at 25 cts.,		$1,344.50
do. do. used in family and on hand, 350 lbs., 25 cts.,		87.50
Nine calves raised on skimmed milk, and sold at $5 each.,		45.00
One calf raised on skimmed milk, worth $20,		20.00
20 deacon skins sold for 6s. each,		15.00
14 spring pigs, bought the last of April, cost $30, total weight 3,036 lbs. sold at $6.50 per hundred,	$197.34	
Fed $25 worth of corn,	25.00	
Total value for milk fed,	$172.34	—172.34
Total amount,		$1,684.34

Making a total average to the cow, heifers and cows, of $56.14 Calling the eight heifers equal to five cows, which would be about a fair average, would give to each cow, $56 38. Total quantity to the cow, 190 lbs., and calling the heifers as above, it would give to each cow 212 lbs.

I should remark in passing that I was unable to visit the town of Norwich at all, as I should have been glad to see many of its farms and dairies if time had allowed.

It was Tuesday night (Jan. 22) that I spent at Oxford. The next day, after a brief call with Mr. Packer upon Judge Clarke, whose horticultural tastes lead him to the perusal of our columns, and who reported the last fruit crop as unusually abundant in that region as it appears to have been elsewhere,—with President A. J. Sands of the Bainbridge Farmers' Club, I placed myself in a light cutter behind an active team to cross the hills that separate the Chenango and the Susquehanna—the day again bright, clear and cold enough to constitute almost the perfection of winter weather. With this drive I shall be forced to postpone until another week the conclusion of my "Notes"—the ground embraced extending beyond the limits now at our command. L. H. T.

Farther Notes from the Susquehanna Valley.

I resume my narrative where it was interrupted last week, as we were setting out on our fifteen mile drive, (or thereabouts,) from Oxford to Bainbridge, mostly up hill or down, although the acclivities are not generally very rapid, and a majority of the hills I think are arable even to their summits—bringing us by degrees into a country, as my companion, Dr. Sands, remarked, more recently transferred from the hands of the lumberman into those of the Farmer, its valley lands many of them none the better for a lumberman's style of farming, and its hillsides as yet scarcely as well rid of their stumps as they probably will be 10 or 20 years hence. It has been found, now that the timber has been cut for quite a number of years, that the land longest cultivated appears to be growing *wet*. In grass, for example, the wild sorts that are fond of cold, soggy spots, are becoming often sad intruders where good hay has heretofore been produced. The value of the land is not often such as to encourage one in undertaking drainage of a very expensive kind, but it appears to have been advantageously tried in several instances, and I suppose there is no better remedy to be recommended. If those who have made the experiment would favor the readers of the Co. Gent. with the facts of the case, including the cost of the process from beginning to end, it might have a good effect in showing others that this is a more feasible cure than many have been inclined to suppose.

After accomplishing perhaps two-thirds of our distance, we called, in passing, upon Nelson Ireland, whose farm of about 240 acres, lies in the western part of the township of Bainbridge. Mr. I. is one of those who has drained to a considerable extent—having laid stone underdrains about thirty inches below the surface of eighteen acres of land, at intervals of about two rods. By the employment of the subsoil plow to loosen up the ground, fully one-third the expense of digging had been saved, and the estimated cost of the drain reduced to the vicinity of 31 cents per rod. The custom in plowing had been to penetrate four or five inches, but Mr. I. has been venturing deeper down, and has found the crops take kindly to the under stratum of light colored clay, after a winter's exposure of it to air and frost, the present yield generally better rather than worse, and a deeper plant-bed ready for future operations. He proposes extending the seven or eight inch system over a wider surface every year.

Mr. Ireland keeps ten cows and winters about a hundred sheep. Tried last year cutting cornstalks, straw and hay, and mixing them wet, as feed, and considered the labor of this preparation well repaid, but in the abundance of fodder the present winter, has not cared to undertake the task. The sheep are descendants of some "New Oxfordshires" purchased four years ago, of J. T. Andrew of Connecticut, which are said to have given very good satisfaction, both as regards the full-bloods and their crosses upon smaller sorts. The main sales from the farm, are the butter made, and the young stock grown. With reference to the condition of farming now and heretofore, I was assured that it might be considered as progressive—the average of crops at the present time being rated at perhaps one-third larger than it was fifteen or twenty years ago, with the exception of potatoes, which have been running down in yield, and rye and wheat, which latter, when sown on newly cleared land 25 years ago, produced as much probably as they do now.

Resuming our seats after a hearty farmers' dinner, we reached our destination, the residence of the Messrs. JULIAND, father and son, at Bainbridge, before the afternoon had far progressed. Jos. JULIAND 2d, is here endeavoring, upon a pleasantly situated farm well adapted for the purpose, to do his share toward the improvement of the stock of the adjacent country, fully believing that a calf sired by a first rate Short-Horn, will more than repay the farmer for its extra cost, before many months pass by, and able to support his theory, I found, by considerable practical experience in its workings. Together with several full-blooded Short-Horn Cows, he has a bull calf of good promise, called "Duke of Oxford," sired by Mr. ROTCH's "Lord Oxford," of which latter I shall have more to say anon—while "Sultan," a bull of Mr. ROTCH's breeding, sold by Mr. J. two years ago to our friends of the Wapping (Mass.) Farmer's Club, did not take his departure without leaving a representative in "Young Sultan," a year old in April last, now weighing perhaps 15 cwt., and bidding fair to equal the merits of his sire. Mr. J. also indulges his taste for pets in a rabbitry, including several varieties, and in other similar directions; his barn is worthy of particular notice and description, but I shall speak below of several prominent merits which it possesses, in common with two or three others I had the opportunity of visiting, only acknowledging at present my indebtedness to Mr. J. for the various measurements which will appear in a subsequent paragraph.

The Bainbridge Farmer's Club, upon whose invitation I had first undertaken the trip, held its meeting that evening in the largest church of which they could obtain the use; I regretted to learn, however, that many even then were unsuccessful in getting places, while the interest manifested on the part of the whole audience, together with the fact that it included many farmers from a wide circle around, who had not previously taken part in the proceedings of the Club, led me to hope that the results of the gathering might be promotive of its interests, and tend to unite and strengthen the feeling of energy and enterprise which is already producing its effects upon the agriculture of the Susquehanna Valley. After a session of nearly two hours, it was announced that the subject of the lecture, the improvement of American farming by comparison with that of Great Britain, would be discussed at length in regular Club meeting Saturday night; and I am since informed that this meeting was the fullest and one of the most *earnest* in the records of the Club, which has been in existence now for several years—it would have been a source both of instruction and pleasure to me, to hear through the medium of such a debate, how far my own deductions and hints had harmonized with the practical experience and judgment of those who took part in it.

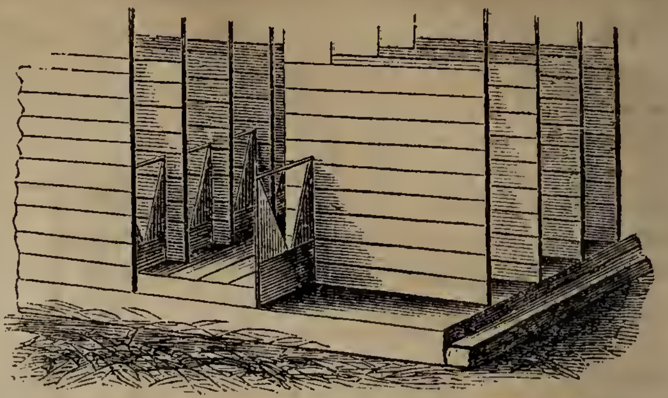
The next morning we had only time for one or two hurried calls—at the farms of Dr. A. J. Sands, Messrs. John Banks, Joseph Bush, Cyrus W. Hickox and Robt. Pearsall—while the original plan, defeated for lack of time, included a number of others, for instance Messrs. A. N. and N. A. Humphrey, Ira Hyde, Charles Bixby, Jerome B. Sands, etc. More than anything else, I was interested in the examination of the large and commodious *barns* at the points we visited. That of Dr. Sands, the newest, is of more expensive character than the others, more so perhaps than many farmers would care to build, but the money has been put to good use in securing the utmost number of conveniences for the farmer, the comfort of his animals, and the perfect protection and preservation of the manure. Dr. S. has promised us a plan for publication, and I shall not therefore attempt any description at present, beyond referring briefly, among its more prominent features, to the loose boxes for the horses, with their facilities for both feeding and watering; the excellent cellar arrangement for stock; the poultry room; the attention given to tight floors and complete ventilation, together with the tasteful and commanding exterior. The teams drive in above, and what lifting remains to be done in stowing away hay is performed by a horse-fork; while it is proposed hereafter to utilize the power of an adjacent stream by making it unload the hay, do the farm thrashing, grinding, stalk-chopping, &c.

In other instances similar improvements are also carried out, in one or two by the remodeling of old barns, as at the farms of Banks and Juliand, in which cases a most remarkable saving both of time and feeding material has been effected over the old plan of two or three scattered buildings, with open yards draining out all the virtue of the manure from under the eaves into roadside ditches, watering the animals once or twice a day at some almost inaccessible point, and requiring the services of a man in winter to look after things well and satisfactorily, whose assistance can now be almost entirely dispensed with.

One feature in these barns was *entirely new* to me, and seems worthy of minute description, although I may fail, even with the aid of a hurried sketch, to make the matter as clear as could be desired. The basement, which in side-hill barns runs partially under ground, opens with sliding doors that may be closed at pleasure, on one side into the yard; there is no floor, with the exception of the well compacted and water-tight soil, and on this floor litter is abundantly scattered, and here the cattle lie down night or day as they choose, the deposit of manure remaining undisturbed as long as necessary, but unfrozen, except crusted over at top, so that teams may drive in, and cart it out during the coldest weather if the accumulation becomes too great. When we turn to the *feeding arrangment*, which is the novel part of the whole system, we find it consists of a series of *Open Stalls*, as they are called, constructed as shown in the engraving, in two rows face to face—perhaps 10 or 12 stalls, or even more, in each row—with a wide manger or feeding-way between, into which the fodder or meal, or whatever the cattle have, is admitted from above, the ends closed by movable boarding, so that it may be swept out if occasion requires. These stalls are too narrow for the animal to lie down in at all, and each goes out and in at pleasure. The floor slopes about two inches from the head backward, and in going out and in, the animal cleans out its own droppings, so that no labor is required in this respect. The triangular space through which they put their heads into the manger, is too small to admit of their getting their feet into it, while, by the projection of the side of the stall 15 or 16 inches into the manger, they are completely prevented from interfering with one another, as regards the head and horns. The cattle are never tied in the stall.

The first objection urged against this system before one sees its operation, is that the cattle in the stalls would be injured by other's "hooking" them, and some have said that no printed description of the open stall would convince any man that such would not be the case. The truth is, however, that *the elevation of the stall floor*, 16 to 18 inches above the ground, a stick of timber or other step being provided, as shown in the above cut—prevents this hooking, because the animal outside, to get at the one inside, must put its fore feet upon the step, thus raising the head entirely out of the downward position in which it must always be put for "hooking" purposes.

The advantages of the system, are the wonderful saving of labor effected in feeding and cleaning out, as compared with other stalls; and, as compared with feeding boxes, in the fact that each animal is protected in obtaining all it wants, and "underlings," instead of being forced to eat the scanty leavings of the stronger beasts, have an equal chance at the first and best. Indeed, when the cattle get to running around and annoying one another, the weaker will go into these stalls for protection at once. The system is thought more healthy also, because water troughs are kept close by the stalls, and the animals while at their food are seen to come out at intervals for a drink, and return to the manger; while it is noticed on the old plan of taking them out to water at night and morning, that after a night's abstinence and a dry feed with daylight, they will fill themselves so full of the almost freezing liquid as to chill the whole system, and perhaps prevent their drinking much when again taken out at a later hour. They would then really have but one long drink during the twenty-four hours, and it is easy to see that this cannot be as natural or healthy as it is to leave them free to quench their thirst before it becomes immoderate, and as often as Nature may dictate. Salt is also kept within their reach, as well as water; the floor is littered whenever necessary, perhaps twice a week; the manure from the horses comes down into the same place, and not a drop or an atom of the whole is lost.



DIMENSIONS—Stalls for Cows, or Steers of Medium Size.

Partitions between stalls—3-inch scantling, boarded on each side—distance apart 2 feet 10 inches from center to center.

Length of stall 5 ft. 6 in. to the manger—side of stall projects into manger 1 ft. 4 inches.

Manger—6 ft. 6 in. wide from center to center—1 ft. 11 in. high on outside—1 ft. 1 in. high on inside.

Floor—16 to 18 inches high from ground—with step—slopes about 2 inches backward from manger.

In the engraving, the end is taken out of the manger to show the heads of the opposite stalls, and the first stall at the right hand is represented without siding—the triangular space through which the cattle insert their heads into the manger is 4½ inches wide at bottom, instead of coming quite to a point, as might be inferred from the cut.

Dimensions of Similar Stalls for Calves.

Width of stalls, 2 feet, center to center—length, 4 feet 4 inches to manger—width of manger, 4 feet from side to side—height of manger outside, 20 inches, inside, 12 inches—sides of stall project 11 inches into manger, to keep each animal's feed separate when so desired.

An aperture in the floor above corresponds in width with the manger, through which hay, &c., is put down for the use of the cattle.

With the end view of a range of these stalls, one of which is left open to show its interior, I give the dimensions as they are constructed by Mr. Juliand for ordinary cattle, and of smaller size for young stock. The stall partitions may be carried up to the floor timbers above or not, as is desired, and the whole can be very roughly and cheaply or quite neatly and substantially built, according to one's preferences and means. It was Sutton Pearsall of Morris, I was told, who first got up this kind of "open stall," many years ago, and it has since been growing in popular favor until it is now adopted in nearly all the better and newer barns in this locality, although scarcely, if at all, known anywhere else. I thought its merits well worth bringing it into more extended notice, although they may be less apparent to the reader than they are to the visitor. Mr. Sotham referred to the subject in a letter published in our columns about four years ago, expressing a very favorable opinion of the plan, but not describing it at length.

The barn subject has occupied so much of my space, that I shall have room but for a word with regard to the excellent Devon Stock of Mr. John Banks, of which it is sufficient to say that it comes from the well known herd of R. H. Van Rensselaer of Morris,—and my reference must be equally brief to the enterprise he has shown in the management of his farm affairs during the few years it has been under his charge—his hay crop, for instance, being now about the same in amount, I understood, as in former years, although obtained from about *one-half* the the surface—the other half having been let for pasturage. Here also I saw some of the Connecticut stock of Bronze Turkeys, and was told that the weight of four young ones hatched in June last, would now average 21 lbs. each.

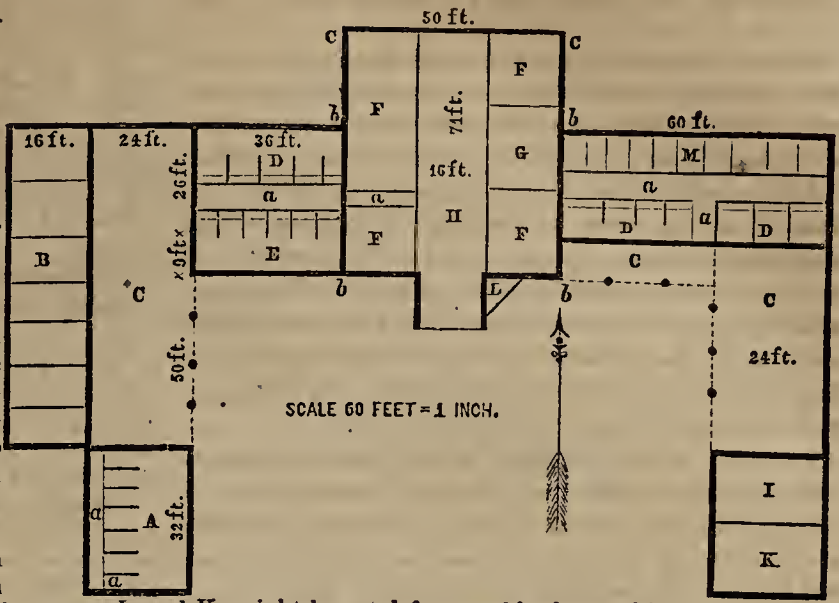
I had hoped to close these Notes the present week, but find that the remainder—including a day at Unadilla, and a drive to Morris—must be deferred until our next. Meantime, my thanks for their kind attentions are due to the officers of the Bainbridge Farmer's Club, together with Col. Juliand, Sr., Jas. M. Banks, Esq., and others of the same place. L. H. T.

New Seed Drill.—Mr. Wm. Slingsby of West Willington, Conn., informs us that, having experienced great difficulty in sowing carrots, he set to work to get up a machine to obviate the difficulty; and that he thinks, after last season's trial, that he has invented a drill which will sow all kinds of seeds in the best manner. Any one wishing further information, can address Mr. S. as above.

PLAN OF BARN AND SHEDS.

Messrs. Eds.—I send herewith plan of cattle stables and barn.

A. Stable for farm horses.
B. Row of boxes for bulls, colts, &c.
C. Open sheds.
D. Rows of double stalls for cows, &c.
E. Row of single stalls.
F. Bays or mows.
G. Meal-room, with stairs to root cellar.
H. Threshing floor.
I. Room used as tool-room for garden, into which it opens.
K. Room used for fowl house.
L. Shed over well.
M. Row of calf pens.
a. a. Passages.



The main barn, 35 by 50, (corners marked b.) is 16 feet posts—b. b. c. c. is an addition, the threshing floor built out with 16 feet posts—the bays with shed roofs to the roof of threshing floor. The box stalls have also a leanto roof. The other parts all 14 feet posts and double roofs, except part of E.

The root cellar is under b.b. c.c.

The stalls, &c., might of course have been more regularly arranged, had the plan been matured before the buildings were begun. The rooms I. and K. might be used for a stable for working cattle, or for some other purpose as convenient.

Lumber is cheap here, and this range of buildings has cost, first and last, about $2,500. The covering is rough hemlock, battened with pine. The foundations all laid in mortar. I do not believe it could be done elsewhere, however, for the same amount. P. Q.

PRUNING THE DWARF PEAR.

[We copy the following brief and clear directions from the new nursery catalogue of Thomas & Herendeen—they may be useful to those who do not wish to examine elaborate treatises on the subject.]

Without as good *cultivation* as the farmer gives to his corn and potatoes, the dwarf pear cannot succeed: and it will after a while fail, if not properly pruned. With these requisites fine and continued crops may be expected, if the soil is good.

The accompanying figures illustrate pruning. Fig. 1, is the two year dwarf at the time of setting out. The dotted lines show where the branches should be cut off at the time of planting. *This must be done without fail.*

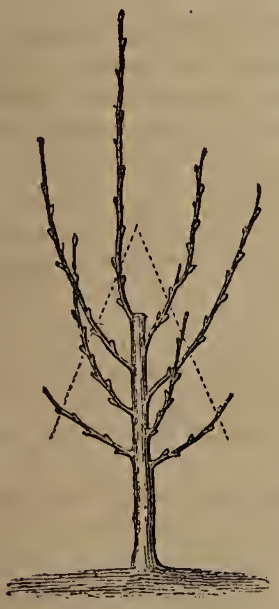


Fig. 1.

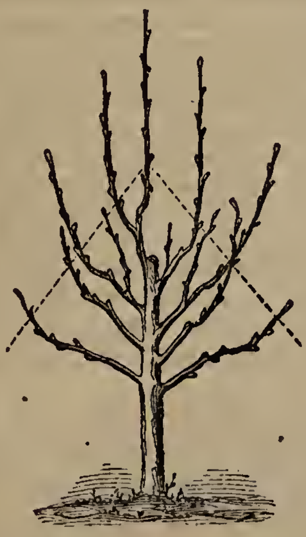


Fig. 2.

Fig. 2, represents the tree after the shoots have grown again, or after it has made its third summer's growth. The dotted lines show where it should be cut back the next spring, or one year after it is set out. The same general course must be pursued for every pruning afterwards—namely: thinning out and cutting back any secondary or other branches, that seem unnecessary, to admit light and air, or to give vigor or symmetry to the tree, retaining the pyramidal form.

T. G. Yeomans, a very successful raiser of dwarfs, remarks: "No one prunes too much."

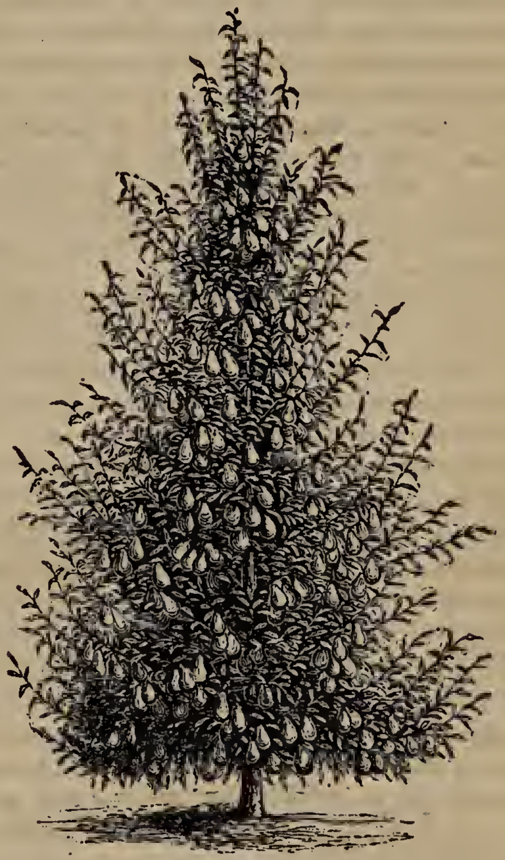


Fig. 3.

Fig. 3, is an accurate portrait of a Louise Bonne of Jersey dwarf pear tree, eight years old, which has been well pruned, and bearing two bushels of pears.

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Grape Growing in Orange County.

This is a great grape growing region, and this county is already celebrated for its fine Catawba and Isabella wines. Grapes do not suffer from the extreme cold of winter, as much as from wet in summer. Last season, 1860, was wet from 20th July to the end of the season, and the crop ripened late, Catawbas on the 6th and Isabellas on the 11th October, thus reversing the order of ripening. The new varieties of grapes appear to do well here. I am keeping records for future publication. Our latitude is 41° 30' north. Wild grapes grow in great abundance all over our mountains and valleys—some of them make a delicious wine. W. A. Woodward. *Mortonville, Orange Co., N. Y.*

[For the Country Gentleman and Cultivator.]

Manuring with Farm-yard Manure and Clover.

Messrs Editors—In your issue of 3d inst., your able correspondent, "Acer," has some remarks on "the relative expense of manuring with dung and clover crops," which he truly says "involves a very interesting question."

His remarks are called forth by reference to the two methods of manuring, as given in my account of Mr. Ryan's farm in the Co. Gent. of 20th of December. At the close of his remarks, he says: "I must not be understood as objecting to green manuring. I have practiced it myself with great success, but I wish its relative merits distinctly measured and properly understood, and make these remarks to incite investigation."

I am very glad he has called up this matter for investigation at this particular time, for in the discussion of such important questions, we want *facts*, not opinions, to guide us. Happily, in this discussion, we have facts to aid us. Perhaps there can scarcely be found in the whole country two farms better calculated to illustrate the relative expense of manuring by the two methods, and the profits resulting therefrom, and the effects upon the fertility of the soils—not for one year, nor for ten years, but during periods of time sufficiently long to fully settle these questions upon soils—like those of Mr. Walker's and Mr. Geddes' farms—farms, to which I alluded in the Co. Gent. of 20th of December.

To give the facts in relation to the whole matter under consideration, so as to be fairly understood, it will be necessary to go into a somewhat detailed history of the length of time the two farms have been under cultivation, the method of manuring, the crops grown, and original quality of the land.

Mr. Walker's farm was originally owned and cleared of its forest growth by the late Rev. Timothy Walker, great-grandfather of its present owner, Jos. B. Walker, Esq. It is now some over 130 years since it came into the possession of the Rev. T. Walker, who was the first and only minister of Concord for fifty-two years.

The farm contains 320 acres—112 of which is plowable intervale land, lying on the south side of the Merrimac river. The soil is alluvial, fine, and of great depth, and was originally as fertile and productive as were the best soils of "old Genesee," when first brought into cultivation; and it is equally so now, when properly manured and subjected to a judicious rotation. It is of this intervale or bottom land that I shall write, which has now been cropped with corn, potatoes, flax, oats, grass, &c., for over 120 years.

Acer says—"The cost of the clover crop is copied from Mr. Geddes at $2.32, but at least $2 more should be added for plowing in—say $5 per acre for manuring with a crop of clover"—or in other words, the manuring and plowing an acre, for planting, costs $5.

Now for the cost of manuring an acre with stable manure and plowing the ground for planting, as per Mr. Walker's figures. He deeply plows his sward land in the fall. In the spring the manure is drawn on and spread, and the land is plowed four or five inches deep with a horse plow and then harrowed. His rule is, thus to prepare six acres annually for corn. The expense per acre, he puts down as follows:

Breaking up the ground in the fall,......................	$ 6.00
Ten cords of manure..	40.00
Drawing and spreading....................................	5.00
Plowing and harrowing in the spring,..................	2.00
Total,..	$53.00

In consequence of weeds and grasses derived from seeds in the manure, he is obliged to cultivate and hand hoe the crop three times, at an expense of $8 per acre. His corn averages 55 bushels; second year 50 bushels of oats, and for the six following years the land averages one and a half tons of hay per acre—then comes the "breaking up and manuring" at an expense of $53 per acre.

Taking the eight years rotation, the profits average $12 per acre—or pay the interest of $200 per acre at six per cent. The land is worth or would sell at private sale, or under the hammer, at least for $150 per acre.

The net income, above stated, was made upon the average price of corn, oats and hay, at Concord. From Jan. 18th to May 1859, Mr. W. sold fifty tons of hay at an average of $14 per ton, and it was upon that price he fixed the income per acre—but from Jan. to May 1860, he sold seventy tons at $17 per ton.

But he does not sell all his hay. He keeps two horses, 2 yoke of large oxen, cows and young stock, in the whole 30 head, and several swine. From these, with the addition of large quantities of muck he is not under the necessity of purchasing very largely of stable manure at $4 per cord, to *finish out* the manuring of his six acres of corn land annually.

The farm owned by Mr. Geddes was purchased by his father, of the State of New-York, near the close of the last century, and has now been under cultivation some sixty years, about half as many years as that of Mr. Walker's. In 1849 the lamented Prof. Norton analysed a sample of the soil and underlying rock of one of Mr. Geddes' fields. It is unnecessary here to give the results of the analyses. The field then had been under constant cultivation for fifty years without animal manures. The first crop of wheat taken off this field was in 1799. This system of manuring with clover and gypsum only, has now been carried on for sixty years, apparently without any injurious effects. Wheat, corn, barley, oats, hay and pasture, have constantly been taken from the soil for that period of time.

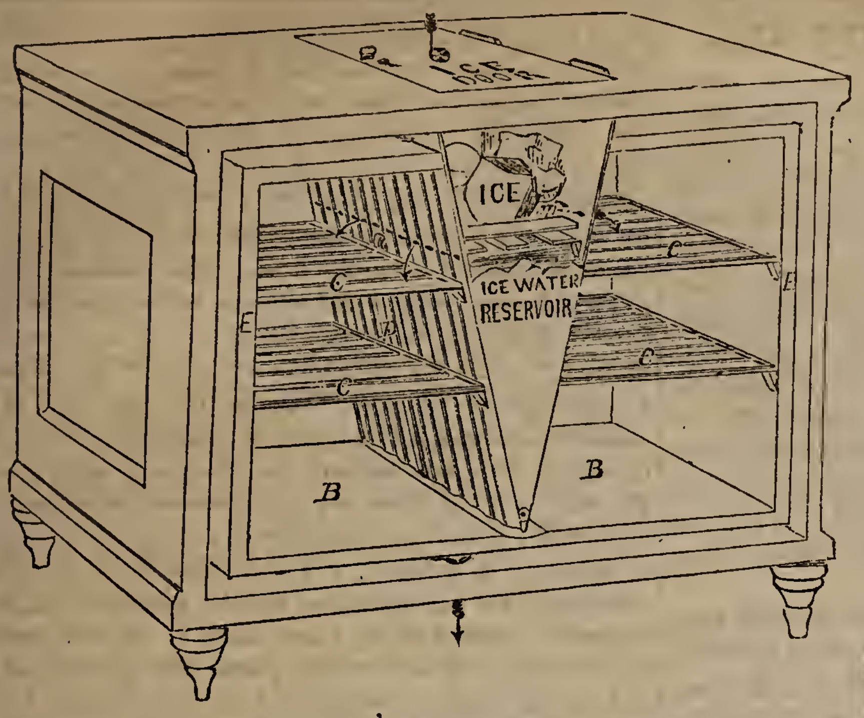
In 1859 it was in barley, last year in wheat, a good crop, 25 bushels per acre. Great care is taken not to manure this field with anything but clover and gypsum—as it is intended to see how long this system of fertilizing will continue to improve the crops under this system of rotation.

Mr. G.'s corn the past season was on a 33 acre field, this measurement going to the centre of the (zig-zag) fences all round, and including the lane on one side; but calling the field 33 acres, the yield was 67½ bushels to the acre, (135 bushels of ears,) besides selected for seed and traced up enough for next year's planting, and not measured. This field, the previous year (1859) was mowed late in June and early in July, and was intended for seed, but the grasshoppers so injured the crop that about only eight acres were cut for seed, the rest fed and trampled down by his cattle late in the fall. Last spring the clover started early and he turned on the field 107 ewes, and pastured them there until the 6th day of May. The field was then plowed in a single land, with care, harrowed well, and marked both ways—the rows 3 feet by 3 feet apart—from 5 to 7 stalks were suffered to grow in each hill. The kind of corn planted was large, eight-rowed yellow. By the 8th of October the corn was all harvested.

But here is one important point well worthy of note. There was no hand hoeing, except two or three rows around the outside, that could not be fully cultivated with a horse.

The cultivators used by Mr. G. are made in his vicinity, having fine steel teeth, sharp, and with thin shanks, that the removed soil may fall nearly in the place where it was found. The field at the time of cutting up the corn was *remarkably free from weeds.* Had this field been manured with barnyard manure, this mode could not have been adopted. In 1859 he had ten acres of corn on land manured from the barnyard, and though twice hoed by hand, and free from weeds on the first day of July, it had more weeds at the cutting up of the crop, on one acre, than the 33 acres had on the whole field last season. The yields were about alike per acre. This point is important—clover plowed under does not seed the land with weeds.

By looking back to Mr. Walker's method of culture, he puts down the expense of three times cultivating and hoeing an acre at $8. It must have cost Mr. Geddes less than



BARTLETT'S REFRIGERATOR.

$2 per acre for twice cultivating an acre of this 33 acre field.

From a 20 acre field in 1859, he harvested 28 bushels of wheat per acre, and pastured it in the fall. On the 6th of last May he put the 107 ewes on to this 20 acre field, and kept them there till time to wash them—also, at the time he put in the sheep, he put in 18 cows, the clover growing faster than all these animals could consume it. When the sheep left the pasture to the cattle, the increse of clover was rapid—so that some six acres were mown by some of his men who had cows to winter. In August, and the first days of September, he plowed under all he could of the clover, harrowed, and sowed wheat, and is expecting to harvest a first rate crop if the season is favorable, never having 20 acres of wheat looking better than this at the time the snow came.

However, it is proper to say here, that last season was a very rainy and growing one, which in some measure explains why the clover pasture produced so largely. A very dry season, of course, would have shown a somewhat different result, and the season there seems to have been equally favorable for the corn crop. The 33 acres of corn was the best field, considering its size, uniformity of growth, &c., that was ever raised on the farm, and the cost was the least—and this corn was grown on land that has been cropped without intermission sixty years, and only manured by the use of clover and gypsum. And yet, after all his experience in this matter, Mr. Geddes does not come forward *and arrogantly assert* that this system of manuring will be every where else attended with the same good results—but modestly gives it as his opinion, "that wherever clover can be made to grow well, *this will be true*," and I have no doubt of the correctness of his opinion.

I do not pretend to any practical acquaintance with the use of clover and gypsum as a manure; but I have penned the foregoing facts, with the hope of, at least, "inciting to investigation" in those sections of the country where clover has not been employed as a manure, as is the case in this section of New-Hampshire.

Warner, N. H., Jan. 10, 1861. LEVI BARTLETT.

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Ayrshires as Milkers.—When I wrote you last year, I stated that I had some Ayrshire heifers, imported from a choice herd in Scotland, of which I would inform you further. Though only two years old, they have given on an average, through the grass season, 14 to 17 quarts of milk per day, and now within six weeks of calving, are giving seven quarts daily. I must take away every thing but hay to dry them up. I hope at some time to give you a more full account of them. E. S. P. *Essex Co., Mass.*

Bartlett's Refrigerator.

Those who intend "in time of winter to prepare for summer," will do well to provide themselves with a good refrigerator—especially as the one we are about to recommend answers an excellent purpose for protecting household articles against freezing in winter, as well as from the heat of summer.

Bartlett's Refrigerator,* from the limited experience we have had with it, appears to be an admirable one. At first sight one is struck with its handsome appearance—neat in form, painted a handsome oak color, the doors with white porcelain knobs, and the reservoir with a silver plated faucet, it will grace the best kitchen hall. Standing on castors it is easily moved from place to place. The figure shows its interior construction, and the arrows the motion of the air currents. The small ventilator being opened at the top, the cold air passes from the ice chamber into the provision apartments, and out at the bottom, the air passing in from above to supply the vacancy—the increased weight of cold air causing a downward current, in the same way that heating by fire renders it lighter and produces upward currents. We have not had this ventilator long enough to test its cooling power in the heat of summer; but being placed in a room warmed by a stove, to a temperature between 60° and 70° Fah., the provision chamber remains only a few degrees above freezing, or from 41 to 45° degrees by the thermometer. Placed in its box, the ice lasts four or five days, being protected on both sides by the cold chambers. It thus becomes a convenient place for keeing ice ready at hand. The "ice-water reservoir," supplied with a faucet, furnishes cold water at any moment.

The walls are zinc filled with pulverized charcoal, and form so good a non-conductor, that when placed out doors at a time when the thermometer was more than 20 degrees below freezing a gill of cold water was five hours in forming a thin crust of ice, although frozen in fifteen minutes outside. Consequently there could be no danger of any dishes of food freezing, if placed in it over night in the severest weather. In summer, for keeping fresh meat and fish, milk, butter, vegetables, fruits, &c., it is obviously of great value.

We intend to perform careful experiments with it next summer, and shall expect to give our readers a timely report.

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[For the Country Gentleman and Cultivator.]

BAKED SQUASH.

The best mode of cooking winter squash is that of baking, and a Western friend furnishes us the following hint on the best mode of doing this: Bake rather gradually, not only until cooked through, but until dry. Potatoes are best baked quick, until done and no longer; the squash, on the contrary, may remain in a moderately heated oven fifteen or twenty minutes after cooked through. We cut in thin slices, bake, and serve up every day at breakfast and dinner, and it is really a luxury. In our section, however, it is a brief one, for the rainy fall has spotted almost every Hubbard and Marrow with decay—sometimes in the form of dry rot. H.

Niagara Co., N. Y.

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Cure for the Black Scours in Horn Cattle.

Burn Indian meal until it is as brown as well roasted coffee. Give the creature from one to two quarts at a feed twice a day. I have tried it several times and never had it fail. An Old Subscriber.

MANURE FOR CORN IN THE HILL.

We were asked recently by a farmer friend for advice in regard to manuring corn in the hill, and the most available sources for supplying the same with as little expense as need be, beyond the labor of preparing and applying. He said that he wished to plant upon a clover sod, which had borne two good crops of hay, turning it over without any application of manure, just before planting time, harrowing and cultivating in the usual manner. He thought that by manuring in the hill, he could secure a good crop; and knowing his soil, as we do, we think such would be the result. In most of our own experiments in hill manuring, we have given a good dressing of manure on the sod, and applied the hill manure to give the corn an early start—a vigorous growth—until it attained strength and length of root to feed on the buried food of decaying sod and manure.

Some good reasons for this practice have formerly been given in this paper; instead of recalling them, however, we will cite a recent paragraph from the New-England Farmer: "In our short seasons, the corn crop often fails to come to maturity for the want of an early and vigorous start in the spring. The tender plant needs something immediately about its roots, to push it along and bring out its broad leaves for atmospheric influences to act upon and perfect it before September frosts occur. A liberal broadcast manuring is not sufficient for this, and so we want something that is cheap and portable, that every farmer may have it to drop into the hill before covering the corn, to impart warmth to the seed, and quicken it into vigorous action." One valuable source of manure for this purpose is found in the droppings from the hen-roost. If one has a supply of dry muck to scatter over the droppings two or three times a week, adding also a sprinkling of plaster, it will need no further preparation at planting time than the mixing it will receive in loading and unloading, and its transfer to the hill. If this is not done, a very good compound can be made at planting time by using the same materials, mixing the muck, plaster and droppings, after removing the latter from beneath the roost. A small handful to each hill, covered slightly with soil, and the corn planted upon it, will produce the desired effect.

Another fertilizing compound may be prepared from night-soil, with charcoal dust and dry muck, added from time to time in sufficient quantity to absorb the liquids, and render the mixture inodorous. A thorough working over will be necessary, so as to incorporate the different materials well together; they may then be placed in heaps and covered with muck or dry soil until needed for use.

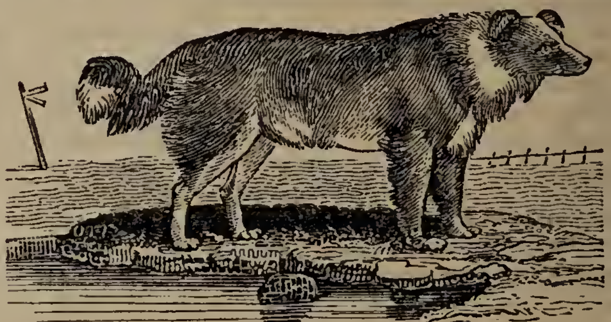
Hog manure, composted with muck and fresh horse dung, and placed in heaps for several weeks, would make a strong fertilizer for this purpose. It would require due attention to mixing the material in proper quantities—at least one-half muck and one-sixth horse manure—and in proper condition as to moisture, and depth and compactness of the pile, which experiment alone would fully determine, to produce the best results, without loss by overheating or from imperfect decomposition of the mass. By turning and remixing once or twice, a fine compost could be made, valuable for this or any other purpose for which such material is required.

Any barn manure sufficiently rotted, can be used for applying in the hill, varying the amount and manner of of dressing according to its strength and condition. A shovelful of common farm manure would be no more than equal to a good handful of either of the two first named, or half the quantity of that third in order. In using barn manure compost, we have only tried it by applying it to the surface after plowing, and then covering or rather mixing it with the surface soil by the use of the wheel-cultivator and harrow. The effect of a light dressing—say eight or ten loads per acre—was very satisfactory, and leaves the ground in better order for the following crop.

The following simple and efficient hill fertilizer is described by the writer above quoted, and is, as there remarked, "within the reach of every farmer," and should be neglected by no one: "Take an old cask, such as a molasses hogshead, mix a bushel of plaster with old muck enough to fill it, and saturate the whole with urine from the barn cellar or from any other source. Continue to pour on the urine freely from day to day, until the escape of ammonia is detected, and then discontinue it. The contents of the hogshead may then be taken out and the operation repeated to any extent desired. In this operation the sulphuric acid in the plaster will combine with and fix the ammonia escaping from the urine, and the mass will be a portable, active and highly fertilizing agent—one that *every* farmer may have."

Extraordinary Exhibition of Dogs.

At Birmingham, England, in the month of December last, there took place an extensive exhibition of dogs, of which 300 were entered as competitors for sundry prizes of large amount. There seem to have been collected on that occasion, specimens of almost all the varieties—nearly countless—of this species of animal. There were, for example, specimens of the plain but intelligent sheep dog; of the grotesque, negro-featured pug; of the Skye terrier, lithe as a ferret, and shaggy beyond recognition of head or tail; of the superb mastiff; of the savage, sullen, repulsive bull dog; of Alpine mastiffs and St. Bernard dogs, so useful in recovering travellers lost in the snow; of black and large Newfoundlands, and of terriers so small as to be indeed quite a marvel, one Scotch terrier being said to weigh less than three pounds, though over two years old. There were specimens of a great variety of hounds—hounds strong and swift and rough coated, that chase the antlered deer; hounds keen, swift, and sturdy, that seek the wiley fox; greyhounds slim and slender, whose rapidity in running, and venturesomeness in leaping, are not more wonderful than the ease and elegance with which such feats are accomplished; half-amphibious otter hounds, and terrible blood hounds with pendent lips; German boar hounds, and several other varieties known as pointers, setters, harriers, spaniels, &c.



THE SHEPHERD DOG.

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Raising Pigs "by Hand."—A writer in the Homestead says "We once lost a sow the second day, and raised her entire litter successfully. We put a little warm milk in the trough, and then put in the pigs. They sucked away at each others feet, and soon drank up the whole." When pigs are taken very young from the sow, he says, "they should be fed often but sparingly, on warm milk and water sweetened. They will drink readily from a spoon."

[For the Country Gentleman and Cultivator.]

Feeding and Feeding-Boxes for Sheep.

Eds. Co. Gent.—As there is and has been much said about feeding and managing fat sheep, I propose also to say a few words for the purpose of bringing out some more reliable information from your numerous correspondents. Instead of correspondents saying only that they or some one else were feeding a certain number of sheep so many times a day, with or without water, and that they were doing well, or not very well, as the case may be,—will they not also say *how much* hay, grain and roots they give per day to a certain number; whether they give water or not, and how much they gain per head live weight in a certain time? This is really about all the information that is worth knowing; for what we wish to ascertain, is which mode will give the greatest gain, with the least feed. It is there where the profit lies. There appears to be a diversity of opinion as regards the racks or feeding-boxes to be used; also as to how often sheep should be fed per day, and at what hours; also, whether they do better with or without water.

As regards feeding-boxes, I have not yet seen any which I prefer to mine for these four reasons: 1, Mine is the cheapest *good box* which I have yet seen—(a sketch of them was given in the Co. Gent., vol. 15, no. 14); 2, they answer for hay, grain, roots and straw; 3, they are easily cleaned, having only to be turned over and back again, which is easily done, as they are light; and, 4, the ease and evenness with which the grain and roots are distributed through the box, as a man with his basket can put in the feed as fast as he can walk, and the width of the box, 22 inches, makes the spilling of the grain, &c., almost impossible, even should the sheep rush upon the feeder, as they frequently will do if as carefully handled as they should be.

My mode of feeding has always been to feed my sheep twice a day; hay twice, grain once, roots once, and straw, together with all the water, salt, &c., they want—always feeding the hay and grain early in the morning and late at night, and the straw and roots in the middle of the day.

Under this mode of treatment my sheep gained in live weight last winter (which is about as they generally have done,) from Jan. 3d to Feb. 3d, as follows:

13	Sheep in stable, gained...........................	14¾	lbs. a piece.
18	do. do. do.	12½	do.
83	do. in open yard with shed, gained............	8	do.
60	do. do. do. do.	6	do.
40	do. in upper part shed, 21 by 26, gained........	8½	do.
70	do. in close-shed on the ground, do.	6½	do.
77	do. in small open yard with shed, do.	7½	do.
73	do. do. do. do.	6¾	do.
70	do. in temporary shed, with privilege of field, gained...................................	5¼	do.

Although I have done a little at sheep feeding, I confess, when such men as G. G. Bradldy and my old friend James Brodie go at the business, I would gladly have their experience—knowing that they are competent and to be relied upon.

S. W. Jewett recommends but two feeds per day for sheep, one between 8 and 9 in the morning, and the other about 3 in the afternoon, and says they will consume one-fourth less fodder than if fed three or four times per day. This certainly would be an item, as my 504 sheep of last winter, consumed 22 bushels of grain and meal per day, besides hay, straw and roots, while under Mr. Jewett's mode they would have consumed but 16½ bush. per day—a saving on grain alone of 5½ bush. per day, or 165 bush. per month. But the question is, can Mr. Jewett make his sheep gain more pounds live weight in a certain time by feeding the same quantity of grain between 8 and 9 in the morning and 3 in the afternoon, than if fed at 6 in the morning and 6 at night?

Now as I have freely given my mode of treatment and the results, will not others do the same—measure the feed; weigh the sheep at a certain time, and then again at another date, and give their results? Above all, I would like to hear how Mr. Bradley succeeds without water.

Bethlehem, Albany Co. JURIAN WINNE.

[For the Country Gentleman and Cultivator.]

Sheep Husbandry in Duchess County.

H. C. of Ohio, will find answers to his inquiries, concerning long-wooled or fine-wooled sheep, in The Cultivator for Feb., vary according to the experience of those who keep sheep. The question of the comparative profit of the two classes of sheep, is a question of fact, and the truth is to be learned from testimony.

I can give the testimony of a good many farmers in the eastern part of Duchess county, who keep fine-wooled sheep. I would premise, by saying that there are some here who think the long-wooled or the South-Downs, to be more profitable, if there be only a small flock, but those who keep fine-wooled answer, in the first place, (to follow the order of the "Ohio Ag. Rep.,") that the fine-wooled live on coarse feed just as well as the others, and that they will endure hard fare rather better; though, of course, they know that poor fare is not profitable for anything.

Second—The fine-wooled sheep do not require more care and better shelter than the others. We are unanimous in saying that the fine-wooled require even less protection from the storms of winter.

Third—The number of lambs of the coarse-wooled, we concede is greater; the others have only a small proportion of twins. We prefer that they should not have any.

Fourth—I do not see it possible, that one should be more exposed to dogs than the other.

Fifth—We all think it profitable to keep fine-wooled sheep on high priced land. I can point to a good many flocks of fine-wooled ewes that shear from four to five pounds of wool, which sells for forty to fifty-five cents, and the lambs, which are raised from them and a coarse-wooled buck, sell in the market for about three dollars. This shows a flock of ewes to be quite profitable, on high priced land; perhaps quite equal to the coarse-wooled, if we consider how many more of the fine-wooled can be kept on a hundred acres than of the others. Good land is the best place for any sheep, when the raising of market lambs or mutton is to be a chief part of the business.

Those who keep fine-wooled sheep in this part of the country, do not generally confine their stock to a single flock of ewes. They raise from their oldest ewes, lambs for the market, using a coarse-wooled buck. They also raise an equal or greater number of fine-wooled lambs, of the same grade as the flock, which are kept till they are a year old and sheared, when the best ewes are selected from them, for the proper maintenance of the flock, and the wethers are sent to market immediately after shearing, if they have been kept through the winter in good condition, as they should be. In the fall, after the lambs are weaned, the oldest ewes, and those having any defect of fleece or form, are fattened for the market or sold for stock. The smaller sheep are disposed of also in the same way.

Thus we have a number of flocks, not all of them needing high feed, adapted to a variety of keep and suitable to stocking a large farm.

I should think that in Ohio, so far from the best mutton market, the difference in favor of the fine-wooled would be greater than it is here.. N. Reed.

Amenia, Duchess Co., N. Y.

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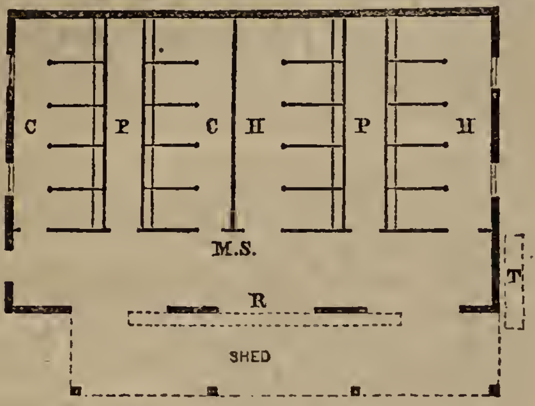
Ag. Papers.—A venerable friend in Vermont, in renewing his subscription to the Country Gentleman, says —"I wish every farmer could be made to become a subscriber and a reader to it; and I know of no use to which the funds of the State Society could be better applied, than to give premiums to such persons as would procure the greatest number of subscribers to the Monthly Agricultural papers of the State. I say monthly, as those come so low that no farmer can say he is unable to pay for one copy; and the reading of the monthly may, like drinking small draughts occasionally of intoxicating drinks, incite the appetite for more frequent indulgence and in greater quantities. I think drinking at this fountain will never produce the delirium tremens." J.

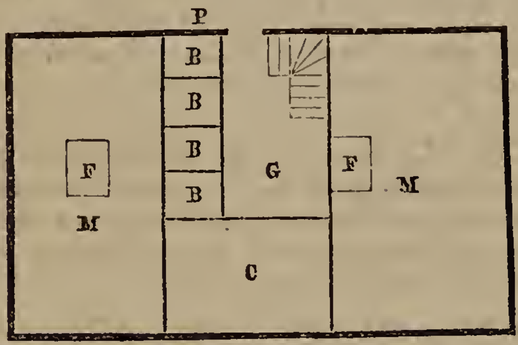
PLAN OF A THREE STORY BARN.

L. Tucker & Son—I have read several articles and seen several plans in your valuable journal for building barns, but none I like so well as my own, which I built last year at a cost of about $1,000, besides our own labor. It is what is sometimes called a three story or a "double decker" barn, built on the south side of an abrupt or steep little hill, or "bench," as they are called in this country, being the first rise from the Whitewater creek bottom. It is about 36 by 60 feet, with a 14 feet "over-shoot;" the hillside was dug out for the cellar or stable, and being chiefly gravel was very useful for making the roads and leveling off the barnyard, which I coated over to the depth of a foot with hard solid gravel. The lower story is divided into two horse stables and two cow stables, with an entry between each, and will accommodate 10 horses and 12 cows in stalls. The walls are about 17 feet high, extending up to the barn floor. On the north side the bank is leveled off 8 feet above the stable floor, about 10 feet from the wall, forming a roadway or passage like an area, on the north side of which is a wall and bank to the top of the hill 5 to 7 feet higher, from which and over this passage extends the bridge-way to the barn floor, the large doors of which are hung on rollers. Under the barn floor, which is near the middle, are the granaries and chaff-room —the mows or bays on the east and west sides of the barn floor, extending 8 feet below it, to the level of the granary floor and over the stables. In the barn floor are several holes with lids, through which we run the grain into the bins as it is cleaned up. At the south or back end of the granary is the chaff-room, into which the chaff falls from the barn floor through a hole. There is a door out on the north side of the granary, under the bridgeway, where we load and unload the grain, feed, &c. There are two flights of stairs, one from the barn floor to the granary, and one from the granary to the entry below. In each of the mows is a funnel extending from over the entry up to the top of the barn, for ventilation and to throw hay, &c., down. The frame is about 16 feet high, weather boarded and painted. We fill the lower part of the mows with hay, which is much easier pitched *down* than up, and put our wheat on top, which we thresh at odd times and in rough weather through the winter, economizing our straw, using a two-horse endless chain power, and also for grinding corn on the cob, and for sawing wood. A trough of running water is in the barnyard, which is warm and sheltered on the west by shed stables. The barn having sky-light windows, we can see well to work in rough weather when closely shut up. S. S. R.



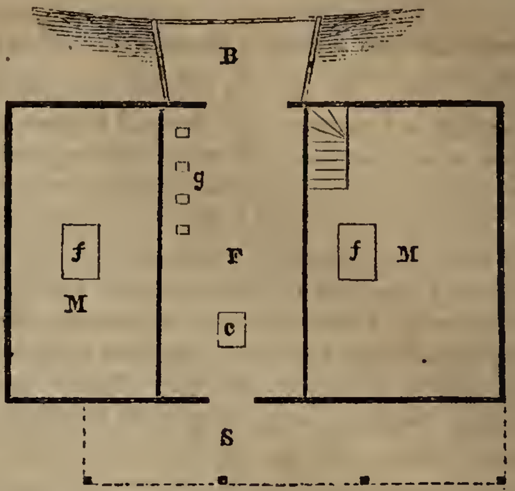
BASEMENT.

C. C.—Cow stables. H. H.—Horse stables. P. P.—Feeding passages. M. S.—Manure shed or overshoot. R.—Straw rack for cattle, with shed 14 feet wide over it on posts. T.—Water trough.



MIDDLE STORY.

G.—Granary. B. B.—Bins. C.—Chaff room. M. M.—Mows or bays. F. F.—Funnels, for pitching down hay. P.—Passage or wagon way, on north side of and level with granary.



UPPER STORY.

B.—Bridge way. F.—Barn floor. M. M.—Mows or bays—f. f.—Funnels for throwing down hay. C.—Trap-door to chaff room—g.—Trap-doors to granary. S.—Straw shed.

New Paris, Preble Co., Ohio.

This appears to be a good and very convenient barn, and admirably adapted to saving the labor of pitching grain, straw and hay, carrying grain, and to preserving chaff and straw. The horse stables being in the basement, special pains should be taken to have it dry, airy, well ventilated and protected well from the usual dampness of such stables, which proves injurious to horses.—Eds.

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NEW PRAIRIE FARMING.

A LETTER FROM G. OF NORTHERN ILLINOIS, TO B. OF WESTERN NEW-YORK.

A——, Lee Co., Ill., Jan. 16, 1861.

My Dear B.—To show you what may be done in two years on the unbroken prairie, I send you some account of the farm of one of my neighbors, whom I have known for some years. Mr. C. is a Scotchman, and an enterprising merchant in the village, but two years ago, tiring of constant confinement in the store and entire application to one branch of business, he purchased two hundred and twenty acres of uncultivated prairie, erected a house and good solid board fences, and began the improvement and cultivation of his farm. He yet spends about a half of each day in the store, driving daily two miles to the village, and passes his evenings at home in agricultural and other reading. His pleasures cluster around his fireside and genial business pursuits, and hence tend to constant enhancement and progress.

The buildings thus far erected, are a house one and a-half stories high, 16 by 24, all occupied daily, and intended for cozy comfort rather than display; a stock stable, 100 by 12 feet, full of good cattle; a swill-house, 12 by 16, and eight feet high, and two double ranges of swine-pens. His stable is built of boards, with roof facing the south, and is just wide enough for taking care of the long range of bovines without inconvenience. The animals are fastened with the upright stanchions common in your State. Although the night of our recent visit was bitterly cold, we found the air in these stables sufficiently warm, and could but contrast the comfort of these cattle, housed and well cared for, with that of most of our prairie herds, without shelter, or only the protection of a straw-pile.

Mr. C. believes in saving and applying manure. He grows sugar beets and mangolds for his cattle and swine, and although the soil producing them has but just awakened from a sleep of centuries and abounds in fertility, he adds thereto the rich manures of his swine-pens and cattle-yards. He has seeded his low grounds with tame grasses, after burning off the old product. About one hundred acres of his farm is under the plow—fifty acres were in corn last year, much of which is yet unhusked, like that of his neighbors. Nearly fifty acres were broken up last season, on which, among other products, he grew five hundred wagon loads of pumpkins. These have helped the crib materially in feeding his numerous stock.

It is his intention to keep a sufficient number of cattle and swine to consume the produce of his farm; he has for this purpose, beside the working teams, thirteen cows, (three Short-Horns,) a pair of Short-Horn bulls, and a fine herd of young cattle. Of hogs there are about one hundred and fifty—ten sows and two boars, fine specimens of stock hogs. The sows, excepting one, are natives or grade Suffolks; the boars are full bloods—one of them purchased from Hon. J. Wentworth's fine stock of this valuable breed of swine.

Mr. C. is planting trees, and in ten years will have a farm more beautifully adorned, enriched and sheltered, than many farms in your own State, which were once covered with the finest specimens of shade and timber trees.

The present condition of the farm can only be considered as the beginning, not the consummation of improvement. In this locality it is now considered an improved farm; but is not *such* a farm as will satisfy the ideal of its owner. When all its low grounds produce a rich burden of the tame grasses, when its division lines are marked by green hedges, and every part is producing profitable crops, then will he begin to consider it an improved farm, but still capable of farther and increasingly profitable improvement.

The soil of this farm is of the indescribable Illinois prairie sort—soil, when it is dry; glue, molasses, tar, mixed in an execrable mud, when thoroughly wet. In some places it is sandy, and may be termed a black sandy loam.

The farm buildings above mentioned, are conveniently located; the swill-house, furnished with cauldron and steam-box for cooking feed, bins for swill and meal, all at small cost compared with its usefulness. I will send you a further description of it hereafter, as I consider it a model arrangement.

His method of penning, and the feeding of his hogs is novel, and worthy of mention. The swine are enclosed three in a pen, in a long range of pens, and the swill is taken to them in the better part of a barrel, arranged between the handles of a wheelbarrow, or something very similar. The wheel of the barrow is three inches broad, so as to be moved more easily over soft ground, and the swill is readily transferred to the feeding-trough with a large dipper or a pail. During the winter he will slaughter about one hundred hogs; all that will nett 100 lbs. each—of course reserving his stock hogs. I might mention other interesting points observed, but will reserve them for another time. You can get some idea from this hasty sketch of an Illinois farm new from the prairie, but in the hands of an energetic and stirring man. G.

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[For the Country Gentleman and Cultivator.]

CRACKED HOOF IN HORSES.

I have a valuable mare that corked herself at the top of the foot. As the wound grew out and reached about an inch from the hair, it cracked open a space of about two inches, causing much lameness and fever. I had a heavy shoe made and well put on. After being set the shoe was spread at the heel, and often spread afterwards with blacksmith's tongs. With a file (a small saw file,) made a crease of about two inches in length across at the top of the hoof above the crack. I repeated the filing about once a week. This crease, with the frequent spreading of the shoe at the heel, kept the crack from opening, and in a few weeks the foot was well. I applied tar and [illegible] hoof grow fast. I think it not necessary lard to make the hoof [illegible] deep incision to band the hoof with iron nor to make a [illegible] with a knife or chisel at the top of the hoof as some do.

Rock Island Co., Ill. C. G. TAYLOR.

[For the Cultivator and Country Gentleman.]

How to Grow Good Potatoes.

Eds. Co. Gent.—As I see an article in your journal respecting manuring effect upon the Potato Crop by Observer, I wish to give my experience with three successive crops of potatoes by yard manuring.

The soil was a light loam, well plowed and harrowed, to have the ground as loose as can be for the drills. I use a double mould-board plow, and put the manure in the drill, and plant the potato on top of manure. I mention the way I plant, as it is customary for the generality of the farmers in this part, to plant the potato and then put the manure over it. Heavy barn-yard manure I have used, and at the rate of 50 tip-cart loads to the acre.

I seldom cut the potatoes, and generally plant the most even size, say as large as a guinea hen's egg, and not to exceed a moderate size hen's egg—anything larger I cut.

I then mix plaster of paris, as it is called here, or gypsum, and good wood ashes not leached, say half of each, well mixed, which I roll the potatoes well in before planting, so that they have a good coating. To make the ashes and gypsum adhere, I wet the potatoes with salt water, say a pint of salt to two gallons of water.

This season, off 3½ acres, I had 550 *minots* of good sound tubers—no rot—and even size. Nothing can excel them for flavor and dryness.

I must also mention that potatoes ought not to be planted a second season on the same field. I change the location every year to the piece of stubble land plowed in the fall and again cross-plowed in the spring.

The potatoes I plant, are a cross between the Irish Cup and Peach Blow. I hybridized them by planting alternately a Cup and a Peach Blow the first years, and now they are all of a uniform kind, and very superior for table—in fact, nothing to excel them.

In a further number I shall give my mode of after cultivation. Charles Hughes. *Aspen Grove, C. E.*

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[For the Country Gentleman and Cultivator.]

How to Exterminate the Black Weevil.

Messrs. L. Tucker & Son—I see in Dec. Cultivator, p. 381, an inquiry how to exterminate the black weevil. I will give my experience, as it is cheap and simple, and won't put H. K. to much trouble if it don't prove effectual

I will first give my experiment. In my neighborhood it is not common for the people to have granaries at home. The mills are numerous, and the people store the wheat at the mill, which makes the body of wheat large—of course the insects are more numerous. I used to stow my wheat at the mill, but having so much of it destroyed by the black weevil, I concluded I would build me a granary at home, and find out some plan to exterminate the weevil. I made some inquiry, and one of our best millers told me that *salt* would drive them away, although it was too much trouble for him to try it for the benefit of his customers. I built me a granary, I think in August, 1857, and made some strong salt brine, with which I wet the sides and bottom of the granary, and sprinkled some among the wheat. And never, to my recollection, have I seen a black weevil in my granary.

I think it an excellent plan for farmers to salt their wheat n the straw as they haul it to stack or barn, so the salt would strike through the wheat and straw, and cattle would eat the straw more readily. I see Mr. J. Lowe, in the Working Farmer, says that the "simplest and most effective remedy is the salting of wheat at the time of housing it—say one pound of salt to every two bushels of wheat. If this precaution be used, no fear need be entertained in relation to the insects referred to, for the effectiveness of the means spoken of has been proved by practical experiment, so as to put beyond all doubt certainty of success." I don't think so much as one pound of salt to two bushels [illegible] is needed. I think less will do.

JOHN A. M. COBLE.

of wheat

Guilford Co., N. C.

[For the Country Gentleman and Cultivator.]

SHALL WE GO WEST FOR FARMS?

No. Stay at home, clean your land well, drain thoroughly, plow deep, subsoil and manure highly, and my word for it, our eastern farms will be equally profitable with the farms of the west.

Messrs. Editors—With my subscription for the Country Gentleman, I send you as an illustration of the above doctrine, an account of the treatment and product of fourteen and a half acres of cold, wet, springy land on my farm in the town of Rye, Westchester Co., New-York.

The land cost me one hundred and fifty dollars per acre, and I expended, in clearing it of stones, cedars and briars, and in fencing, draining, cultivating and manuring, nearly two hundred and fifty dollars more. Of course it now stands me in about four hundred dollars per acre.

The first season the land was fenced anew, and drained by the use of about sixteen thousand three inch drain tile. One field of eight and a half acres, was planted with corn on a sod turned under twelve inches deep, with a "double Michigan sod and subsoil plow." The corn was manured with ashes in the hill. The crop fair and satisfactory for a first attempt, but was not measured accurately.

Lot no. 2, containing six acres, was plowed in the autumn of 1858, and a heavy dressing of compost manure turned under twelve inches deep, then harrowed and sown with rye. The crop of straw was enormous, being very thick, and on an average seven feet high, some of the more ambitious stalks rearing their heads over eight feet in height. But when the grain was about half filled, the straw was struck with rust and the kernels, of course, were shrunken and imperfect; still the crop was twenty-five bushels per acre.

To make amends for this comparative failure, the stubble was immediately plowed under twelve inches deep, and the field sown with buckwheat. This grew finely, and gave me a crop of thirty-nine bushels per acre, making a total crop of rye and buckwheat, of sixty-four bushels per acre for the season.

The treatment of these two lots has been somewhat different during the past season, which, with its results, I will now proceed to describe.

Lot no. 1, of eight and a half acres, was manured heavily with a very rich compost, and with the stalks of last year's crop turned under eleven inches deep, followed by a subsoil plow to the depth of seven inches more, thus disintegrating the subsoil, which is a clayey loam, underlayed with a clay hardpan to the depth of eighteen inches. When fitted it was planted with corn in hills, three feet apart each way and four kernels in each hill.

Lot no. 2, of six acres, was manured in a similar manner with lot no. 1, and plowed fourteen inches deep. I had seen it stated that corn would not succeed well after buckwheat, and I determined to make an experiment and test the truth of this opinion. When fitted properly, instead of planting it in hills, I drilled in the seeds, dropping a kernel every nine to twelve inches, in rows three feet apart. The seed of this field, let me add, was treated to a thin coating of tar and rolled in slacked lime. This process seemed to retard its germination, as it did not appear above ground until several days after that not so treated. But it had the effect of preserving it from the depredations of the crows, which were numerous, but expressed a thorough dislike of it. The planting was finished on the 25th of May.

The cultivation of the two lots was much the same, and consisted in running the cultivator between the rows four times, and hoeing once. Pumpkin seeds were planted thickly through both lots, and turnip seed was sown between the rows, with the double object of smothering the weeds that might otherwise grow, and of providing green food for my stock in winter.

And now for the result. From the two lots containing fourteen and a half acres, I harvested [illegible] and seventy-[illegible] twenty-two hundred [illegible] and a half baskets of ears of corn, each basket yielding eighteen quarts of shelled corn; making twelve hundred and eighty bushels and seventeen quarts. This gives an average of eighty-eight bushels and ten quarts per acre. Besides this I harvested fifty cords of pumpkins and four hundred and three bushels of turnips, many of them of enormous size, some of them measuring over three feet in circumference. A large number of turnips were left in the field, having grown so rapidly as to split open, and thus were spoiled.

I did not find that the previous crop of buckwheat had any effect upon the corn. So far from this, the buckwheat lot gave decidedly the best corn, the crop upon it being 92½ bushels shelled corn per acre, while the other lot averaged only 85 bushels and 11 quarts. I ought to say that the lot upon which I raised the rye and buckwheat the previous year, had received the most manure, and I think was therefore in the best condition. This circumstance qualifies my opinion upon the advantage or disadvantage of drilling in the corn, instead of planting in hills.

The kind of corn I raised was the *Improved King Philip*, or Brown variety.

The following is the estimated expense of the crop per acre:

Interest on land at $400,	$28.00
Plowing,	6.00
Harrowing and marking out,	1.75
Cutting, four times,	4.00
Hoeing once,	1.50
Cutting up and carting to barn,	2.50
Husking 160 baskets at 3 cents,	4.80
Twenty loads of manure at $1,	20.00
Total,	$68.55
Per Contra.	
88 bushels 10 quarts corn at 75 cts.,	$66.21
3 tons stalks at $5,	15.00
3½ cords pumpkins at $2,	7.00
28 bushels turnips at 20 cents,	5.60
Total,	$93.81
Deduct expenses,	$68.55
Net profit per acre,	$25.26

Allow me to add, that in laying tile care should be taken to place them below the possible reach of frosts, for if frozen they will crumble and fall to pieces. Three feet I think a good depth. Another thing—I have found by experience that the main drains should be left open at both ends for the admission of air, by which means the soil will be much earlier warmed and the roots of plants more thoroughly aerated.

How to Increase your Manure.

And now let me say a few words upon the subject of manures. Stable manure being expensive, and not easily obtained in this neighborhood at any price, I have endeavored to find other fertilizers to supply the deficiency; and as the question has been often asked, what was I going to do with "that stuff?" I am led to believe the subject of fertilizers, their varieties and uses, is not as well understood as it should be by those who are deeply interested in it. At all events, people neglect to obtain at the cheapest rates some of the most valuable renovators of the soil. In some instances they can be had for carting them away. The first question, in my opinion, should be—will this or that article, within our reach, increase the productive powers of the soil sufficiently to pay the expense of cartage and preparation? If it will, let it be collected at once and added to the compost heap.

Perhaps an imperfect list of the articles of "stuff," which have provoked inquiries and sometimes, no doubt, a smile, may here be given without trespassing upon the reader's patience, and possibly explain the respectable crop above described. My compost heap is an *omnium gatherum*. It embraces anything and everything, animal and vegetable, that I can lay my hands upon—feathers, woolen rags, all sorts of bristles and hair, clippings of wool and of skins of all kinds, tobacco stems, sea weed, salt hay, straw, potato tops, weeds, hog and stable manure, night soil, sweepings of the hen-house, sugar-house "scum," blood, the parings of horses' hoofs, plaster of [illegible] stereotype foundries [illegible] bones dissolved in oil of [illegible], earth saturated with whale oil, currier's shavings, sea sand, salt, dead animals, &c., &c., with loam enough to absorb all effluvia and prevent any offensive smell.

This is compost heap no. 1, into which, I would observe, neither lime nor ashes, especially in their caustic state, should ever enter, because much of the value of this heap depends upon the ammonia which it contains, and which lime and ashes would disengage and thus suffer to escape.

To avoid this consequence, I have another compost heap, no. 2, in which may be found old mortar from the walls of buildings, plaster of Paris, spent soda ash, bones, the residuum of soap factories, refuse salt, shell and stone lime, caustic or slacked, ashes leached or unleached, pot ash scrapings, saw-dust, charcoal and coal ashes, soil, and many other articles often easily obtained. Muck should have entered largely into both of these composts, but unfortunately my farm does not afford any.

A good compost may be made of shell lime, burned shells—say one hundred bushels slacked with water in which from twenty to thirty bushels of salt have been dissolved, and then add two hundred bushels of ashes, leached or unleached. Unleached ashes are of course much most valuable, as they contain large quantities of potash, which is essential to most crops. This compost, applied in autumn at the rate of thirty bushels per acre, on winter wheat or rye, or upon meadows, produces a fine effect. Let this be followed in the spring, upon wheat or rye, with a dressing of ground bones or bone ash, and you will have a field of grain of which no farmer need be ashamed.

I will close this long article as I began it, by saying use plenty of manure, drain thoroughly, plow deep, subsoil, plant in season, and cultivate well, and you will raise more on one acre than is ordinarily produced on three; at least such is the opinion of one, who although a novice in farming, has from actual experiment satisfied himself of the fact. J. F. T.

P. S. If you wish to keep up with the agricultural progress of the age, take two or three of the best Agricultural Papers of the day, study them well, and it will be the best investment you can make of the small amount of money which they cost.

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[For the Country Gentleman and Cultivator.]

WEIGHING AND MEASURING HAY.

Messrs. Editors—I notice by an article in a late no. of the Country Gent. on the weight and measurement of hay, you call for the results of experiments where they have been actually made. I have twice tried the experiment of measuring and weighing hay, and I am satisfied that no certain rule can be given unless the quantity, quality, and depth of mow are taken into account. One mow of hay, which I tried, was a mixture of clover and timothy, nearly half and half—rather coarse hay. The bay was 18 by 30 feet, and the hay was 10 feet in depth. The balance of the mow above had been unoccupied. This was offered to me for 10 tons, calling 8 feet square or 512 feet a ton. I divided the mow in the centre, and weighed half of it, and it weighed 3 tons and 1200 lbs., being almost 750 feet for a ton. The next was a mow of fine hay, put in the bay green enough to mow-burn some. The bay was filled to the roof, and afterwards covered with oats in the bundle. The posts were 14 feet, and the bay was 16 by 28 square. After taking out about half the depth of this mow, finding it very solid, we agreed to cut with the hay knife in a square form and weigh, and both parties should abide by the rule established thereby. We weighed out 2000 lbs. and measured the square from which it was taken and it was 8 by 8 feet, or 512 feet for a ton, and I accepted the mow by that rule, and I am satisfied that none but fine hay, and that closely pressed, will make a ton in 8 feet square. Wm. J. Patch.

Tioga County, N. Y.

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The Vermont State Agricultural Fair, will be held at Rutland on the 10th, 11th, 12th and 13th days of September next.

FARM WORK FOR WINTER.

There is farm work for winter as well as summer—labor which if then accomplished leaves greater time and room for the indispensable operations of seed time and harvest. But many farmers fail to find all this work—fail, perhaps, because they look in the wrong place for it, or have very little mind to engage in any thing beyond the necessary chores of foddering and fire-wood—giving these no very systematic or economical attention.

Among other reasons why some do little farm work in winter, we may mention the opinion they hold, that only large operations are profitable—only showy days' work are counted—that little things are of very little account—or that they have "no faculty for choring." These opinions are evidenced in the fact that their cattle are fed now at seven and then at nine in the morning, with no attention to regularity—they get drink, it may be, in the course of the day, and occasionally have dinner and supper together after sundown. It is thought hardly worth while to clean out stables more than two or three times a week, or give bedding only as happens to suit convenience; and as for currying a cow or ox, it is thought a matter of indifference whether the working-horses receive that attention, except when to be used on the road, away from home. The sheep and calves must "take their chance," or if they get good feed and shelter, carelessness and irregularity deprive them of half their value. As to getting wood, it must be very favorable weather, an empty yard, and a gang of hands, which sets teams and axes in motion—besides there must be no call for "going to town," or that will have the preference. But not to overstate the matter, we must allow that very few are remiss on all these points—most slack farmers neglect some of them, or something equally important not included in the catalogue.

The thorough, systematic farmer thinks no duty or chore beneath his attention. He finds no lack of employment—and paying employment too—for every day in winter. Attention to the comfort and regular feeding of his cattle is repaid by their thrift and growth—they increase in value in winter as rapidly as in summer. The dairy does not cease to be productive; the young stock increase in weight and size, instead of getting "spring poor;" his sheep are gaining in flesh and wool, and promise a healthy increase the coming season; his horses and oxen get daily exercise, as well as daily feed and care, and will come out strong and energetic for the spring work, besides earning a handsome sum by winter teaming. His fattening animals are fed upon a rational system—one calculated to make the most of the feed given and the product desired. But the care of his stock is not the only work done at the barn during the winter. Much care is given to increase the quantity and quality of the manure, and to preserve it from waste or loss until the season of application to the soil.

The cutting and drawing of fire-wood, rails, and lumber, affords some employment for the leisure of winter, and generally very profitable employment. It seems the appropriate season for this provision for the future. Fuel is an indispensable necessity—if the summer's store is not procured now, it will stop the farm work every week, perhaps, at its busiest moment, to replenish the failing supply by another "jag." Or it may purloin the rails from the fences, every loose bit of lumber about the premises, or attack shade and fruit trees "to keep the pot a boiling," if the demand is treated with neglect.

Not to go into further detail, we may close with the trite remark, that there are a thousand things needed in summer which may be prepared in winter, thus gaining valuable time from its more important labors. Implements and buildings may be put in order, material for fences drawn and prepared, the stock of manure largely increased in amount and value, animals domesticated and trained to labor, and plans arranged for the future operations of the year.

"BALLOON FRAMES"---12th Article.

[Written exclusively for the Country Gentleman by GEO. E. WOODWARD, Architect and Civil Engineer, No. 29 Broadway, N. Y.]

The early history of the Balloon Frame seems to be somewhat obscure, there being no well authenticated statements of its origin. It may, however, be traced back to the early settlement of our prairie countries, where it was impossible to obtain heavy timber and skillful mechanics. "Loudon," in his Encyclopedia, published twenty-five years ago, gives an illustration of a portable frame to be covered with canvass, which was designed to be shipped from England to any of her colonies and to fulfill its destiny as a temporary home. This portable frame was made of light pieces, and combined some of the principles of the now well known Balloon Frame. As we have not been able in our researches to trace farther back than "Loudon," any allusion to a frame of this character, we must therefore conclude that the Balloon Frame, has only come into existence within the last generation. It is by no means probable, however, that the use of the Balloon Frame in this country originated from any published suggestions, but the fact seems patent to any one who has passed through the pleasures and the vicissitudes of the life of a pioneer, that his own necessities have indicated the adoption of some principle in construction, that with the materials he has at hand, shall fulfill all the necessary conditions of comfort, strength and protection. To these circumstances we must award the early conception of this frame, which with subsequent additions and improvements, has led to its universal adoption for buildings of every class throughout the States and cities of the west, and on the Pacific coast.

In the older States with their vast forests of timber, and great lack of saw mills, the early pioneers found a secure and economical-home in the log cabin, but this is not the case upon the prairies, often remote from timber and mechanics, which can only be obtained at a great expenditure of labor and money; they have been obliged to study rigid economy, in both materials and workmanship. The portable steam saw-mill, which now keeps an even pace with "the star of Empire that westward takes its way," is always ready to rip up into Balloon stuff the oftentimes too small and limited groves of timber which the annual prairie fires have spared. So successfully has necessity illustrated the value of this invention to which she has given birth, that its application has become general with all classes of the community who seek to get the greatest amount of good with the most economy of means. Nor is it overlooked or underrated by those who seek to build elegant and substantial structures, without closely considering the cost. So thoroughly useful and practical has the Balloon Frame proved itself to be, throughout the Western and Pacific States, that its adoption among the older settled portions of our country cannot be looked upon as a matter of experiment. It is, as far as climate and exposure are concerned, better adapted, as we have not the same steady intense cold, nor the howling searching prairie blasts that characterizes the winters of Northern Iowa and other parts of the west.

There is no reason why the Balloon Frame may not be made as warm and comfortable, in every respect, as any style of frame known, for there is scarcely any portion of our country that is not blessed with the materials for concrete, brick, or lumber. One of these three requisites for making a house warm is almost certain to be found in any locality that is worth living in.

In the use of concrete it is better to leave a space or air chamber between it and the siding, the spaces between the studding to be closely filled up with it, and if brought a little forward of the face of the studs, the plastering may then be laid directly upon it, no lathing being required. To concrete a Balloon Frame in the manner usually adopted, it is only necessary after the frame is finished to tack a rough board to the inside of the studding, first interposing a strip of the thickness of two lath against the face of the stud, that the face of the concrete, when finished, may project that much from the face of the studding. On the outside another board must be tacked, which is prepared thus: Take an inch board, place it flat against the studding, and with a red chalk pencil mark the places where the studs touch the board; then saw up another board of the same width into lengths equal to the distances between the studs, and nail them flat to the first board; these lengths are nailed between the chalk marks and are just the width of a stud apart. The object of this is to make the concrete finish one inch back of the outside face of the studding, and which shall form an air chamber between the concrete and the siding. If vertical siding be used the diagonal ribs as shown in the engraving, fig. 15, will form the air chamber, and the concrete may finish flush with the studding outside.

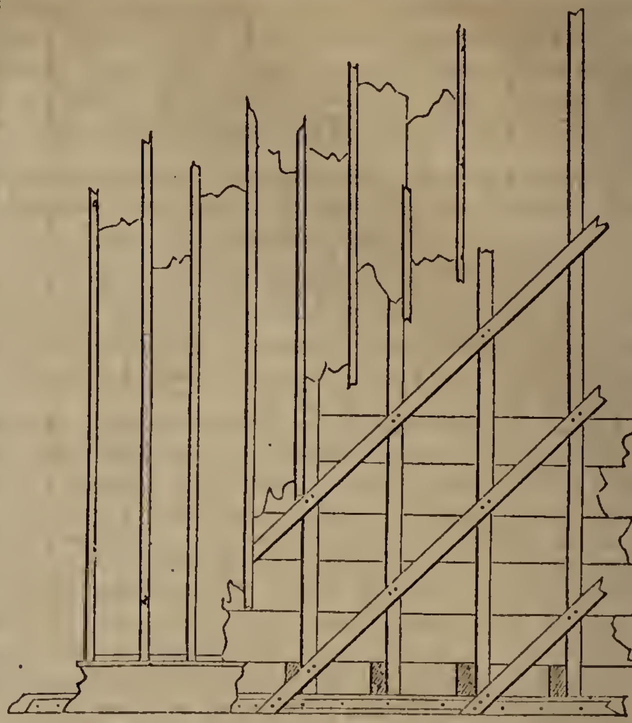

Fig. 15—Diagonal Ribs for Vertical or Battened Siding.

Ribs for vertical siding may be put on in two ways; one as shown, by which the ribs run over the sill and are nailed to it; a strip of the same thickness as ribs, say 1¼ inches, nailed on to the sill to fill up the space between the ribs, and is then covered by the outside plinth or base. The other plan is to set the studs back 1¼ inches from face edge of sill; then let the end of ribs bevel down on the sill, or dovetail them into the edge. The strongest are those that lap or dovetail. In constructing a house of any kind it is a first rate practice to concrete thoroughly between the ends of the floor joists up even or above the top of the floor, it being a sovereign preventive against rats in the walls, ceilings and partitions.

In concreting a frame it is only necessary to add, that two wide boards only are necessary, for as fast as the concrete hardens the nails are drawn and the boards raised and tacked on for the next course. We may also state that if the plastering will not adhere to the face of the studs and the side girth, which it may not do unless very rough, they must be lathed, and as the concrete is brought forward of the face of the studding the thickness of two lath, it will give a chamber for the clinchers of the thickness of one lath, which is sufficient. The air chamber prevents dampness, and promotes warmth. In using concrete the studding may be two or three times as far apart, according to size of building, as would be necessary if none were used. The same number of rafters and floor beams would be required, but they rest on the plate and side girth, which are imbedded in the concrete, and are thoroughly secure.

Studding may also be bricked up with an inferior quality of brick, leaving an air chamber in the manner already described, and plaster directly on to the brick, without lathing. Brick is sometimes put in on edge, but when so used the studding should not exceed 24 inches apart. It is usually best to make the brick wall 4 inches thick.

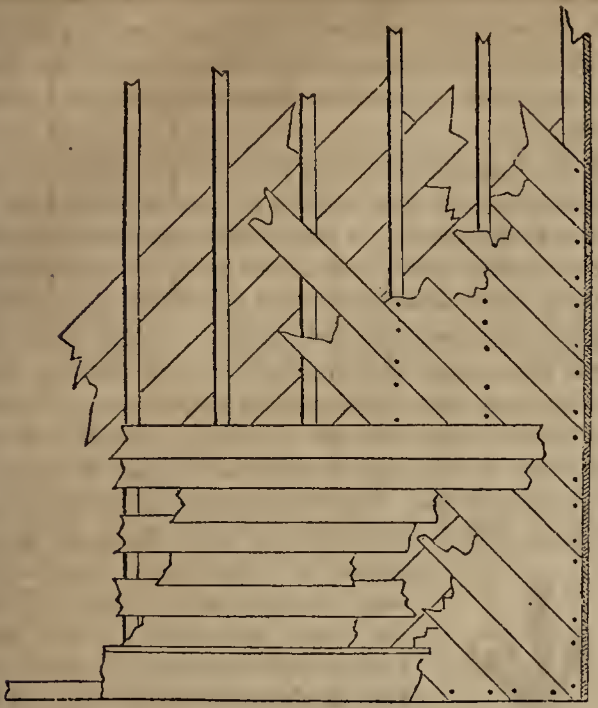

Fig. 16.—Showing the Manner of Putting on Diagonal Lining Outside and Inside. Siding may be Horizontal or Vertical.

A house may also be made warm by lining, and where lumber is cheap and the exposure great, it should be lined both inside and outside. We show the manner of lining in the following engraving, fig. 16; either outside or inside lining may be used, or both together. Where diagonal lining is used it should be reversed or run the other way on the opposite side of the house.

In fig. 17 the lining is put on horizontally, and where a frame is lined inside it is best to do it as shown in fig. 17, as it becomes an aditional tie to the corners of the frame, it being alternately lapped on the corner stud.

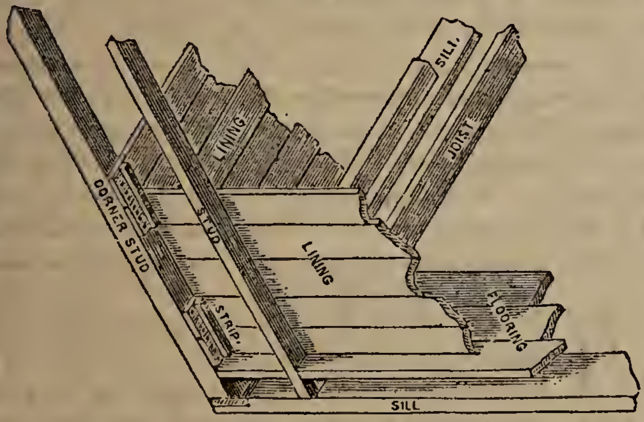

Fig. 17.—Manner of lining Balloon Frames inside.

Where both outside and inside lining are used, and put on diagonally as shown, it must be evident to the most confirmed skeptic, who is disposed to question every theory on the strength of materials, that this is a well knit, strong and enduring structure, that must satisfactorily answer all objections that may be urged against it.

On the score of economy and warmth, we give the preference to concrete or brick, as both these save lining and lathing. On the score of strength we should prefer the diagonal lining, and only for the reason that it makes doubly strong what is abundantly strong without. It is a natural supposition that every thing when first adopted should be heavy, cumbersome and strong; but experience has shown that our clipper ships, light buggies, and improved plows, are more efficient, rapid and durable than their original representatives.

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Large Cow.—According to the Boston Journal, the largest cow ever sold in Brighton market, was purchased there a few days since by A. R. Barrows. She weighed when alive 2650 pounds, and when dressed 1850 pounds. There was taken from her 105 pounds of rough tallow and 275 pounds of kidney tallow—twice the amount usually found in a fat ox. She was six years old.

PREMIUM CROPS IN WISCONSIN.

Eds. Co. Gent.—We think that Winnebago county, Wisconsin, is as good a county as any in the west for farming, which I think I can, in a measure, prove to you by giving you a statement of the crops which received the premiums at our last County Fair.

Wheat.—The first premium of a fanning mill, was awarded to M. C. Bushnell of Omro, for $65\frac{3}{4}$ bushels of Canada Club wheat, raised on one acre of land. The second premium of $3, was awarded to G. W. Lathrop of Algoma, for 45 bushels of Canada Club wheat raised on one acre of land.

Indian Corn.—The first premium of a corn sheller, was awarded to E. S. Durfee, for $136\frac{1}{2}$ bushels of shelled corn of King Philip variety, raised on one acre of land—planted $2\frac{1}{2}$ feet apart one way and 18 inches the other—three stalks to the hill. Second premium to M. C. Bushnell of Omro, for $104\frac{3}{4}$ bushels of shelled corn of King Philip variety, raised on one acre of land. Third premium to G. W. Lathrop, for 103 bushels of shelled corn of the King Philip variety, on one acre of land—planted $3\frac{1}{2}$ feet apart each way.

Oats.—First premium to John Howlill, Black Wolf, 54 bushels, 22 lbs., on one aere of land.

Barley.—First premium to J. C. Wheeler, 55 bushels 28 quarts on one acre.

Carrots—*quarter of an acre.*—First premium to Sam'l. Charlesworth of Omro, 414 bushels. Second premium to M. C. Bushnell of Omro, 360 bushels.

Mr. Eli Stilson raised the largest amount of carrots on a quarter of an acre, but did not compete for a premium, but is a competitor for the State premium, having raised 421 bushels, or at the rate of 1684 bushels per acre.

The above statements were made under oath, and as I am well acquainted with all parties, I think there can be no doubt but that it is correct. G. W. Lathrop.

Winnebago Co., Wis., Jan. 17, 1861.

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[For the Country Gentleman and Cultivator.]

HUSKING CORN.

A writer in your last issue speaks of a young man in his employ, who husked in one forenoon, and quit at 12 o'clock, *forty bushels*, and bound up part of the stooks—that *he* superintended the measuring, &c., then adds: "If any man or boy can beat this, we shall be pleased to hear from them through the Cultivator."

He does not say whether the bushels were ears or shelled corn. In either case, we have men in Salem county who can husk more corn in a given time.

I know a man who did husk in four and a half hours, between six and half-past ten o'clock the same forenoon, one hundred bushels of ears of corn—making sixty-two bushels shelled corn, at the rate the corn usually turns out from the bushel of ears. I also superintended the husking and measuring, and know the account to be correct. The corn was of a large eared variety and would yield near seventy bushels per aere.

He had a man who boasted on his fast husking, and after performing the above feat, he offered said man ten dollars if he would husk as much, or five dollars if he would find any other man who would—in the same length of time—in a field of better corn. But the offer was never accepted—the trial never made. After that, in better corn, on a short trial against time, he husked over eleven bushels of ears in 21 minutes, or at the rate of forty bushels in 75 minutes. D. P. *Salem, N. J.*

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Massachusetts.—The annual meeting of the Franklin County Agricultural Society was held at Greenfield, Jan. 14th, and the following officers were chosen for the year ensuing: President, Henry W. Clapp, Greenfield; Vice Presidents, Thomas J. Field, Northfield, and Josiah Fogg, Deerfield; Secretary and Treasurer, James S. Grennell, Greenfield, and twenty-six trustees.

WINTER VISITS TO NURSERIES.

The nurseries of Western New-York are the most extensive in the world, and interest is always felt among many of our readers in relation to their operations. During recent hasty calls at a few of them, we obtained some information which may prove interesting.

Nursery of T. C. Maxwell & Co., *Geneva, N. Y.*—This covers over 200 acres. The land has been all tile drained, at distances of 30 feet apart, the drains from 2½ to 3 feet deep. There must have been consequently over 50 miles of drains. The excellence of their stock shows the utility of the operation. Most of their business is in the wholesale trade with dealers—they have no agents in the field. They have lately erected three glass structures, each nearly a hundred feet long, for propagating houses. They are neatly built, and serve as models. They find the long shallow wooden tanks, for the circulation of hot water, now so commonly adopted, the cheapest mode of heating. The tanks are about 4 feet wide, and the water two inches deep. A division is made lengthwise, making two parallel channels or tanks each two feet wide—the water flowing outward in one, and back in the other. The water was formerly covered with slate, and the sand, in which to set the pots, placed on the tile. They now find board covers better, being less liable to breakage, cheaper, and rendering the heat more uniform. When the water flows out of the heater into the tank, its temperature is about 130° Fah., which is reduced about 20° on its return. A tank covered like this would not warm the apartment sufficiently, and a few metalic pipes are added.

The proprietors are now engaged in root grafting; a number of hands were busily employed in grafting *moss roses*, of which they had already potted and given a bottom heat to some 15,000. They nearly all grow. The mode is the same as that practiced for many years by nurserymen, but for those not familiar with it, we give the accompanying cut, fiig. 1. The Manetti root is cut into pieces an inch and a half long, and a graft nearly the same length inserted by cutting half way into the root, as indicated in the figure, and the graft cut and bound on with small waxed cotton twine or thread. Care is taken that an exact coincidence is made between wood and bark, on one side, as in common grafting. There are two important advantages in this mode of propagating. The Manetti root imparts nearly the same vigor as is given by budding on this rapid growing stock. But as the roots, properly selected, do not contain buds, there is no danger of the stock sending up suckers to replace the budded shoot, and to disappoint the owner by its worthless bloom. The owners of this nursery employ about 20 men at the present time, and tripple that number in the summer. Their establishment may be regarded as one of first class character.

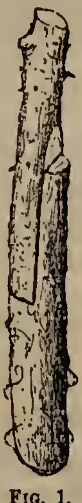

Fig. 1.

W. T. & E. Smith, *Geneva*, have also an extensive nursery in the same neighborhood, but circumstances prevented an examination of the premises.

Nursery of H. E. Hooker & Co., *one mile east of Rochester*.—This nursery has long maintained a high reputation. Over 200 acres are devoted to it, and nearly that amount planted with trees. There is a moderate extent of propagating houses. They are warmed with hot water tanks, like those just described, which extend around the apartment, (being connected by pipes at the corners,) and have no partitions lengthwise, the water passing around the circuit of the tanks and returning. Brick flues from the fires used for warming the water, keep the house warm.

H. E. Hooker pointed out some of the results of experiments he had been making in pruning evergreens to thicken their growth. A thin or bare appearance is often given to young pines, (the Scotch pine, for example,) by the long shoots which they make in a single year, leaving long bare sticks with no buds on them. He finds, by cutting in these shoots thus destitute of buds, early in summer, that new buds are formed the same season just below the cut, and these grow the next year. The Scotch and White pine may be thus rendered as compact in form as any one may desire. The Norway and other spruces being always furnished with plenty of buds along the young shoots, will throw out branches the same year they are cut back. Hence the reason they make the best trees for screens, as they may be readily cut back as circumstances require, and immediately thicken up again. These experiments are corroborated in their results by other cultivators.

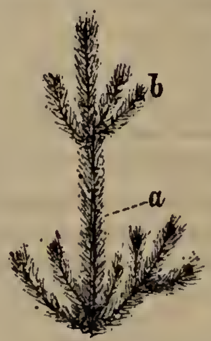

Fig. 2.

The accompanying figure (fig. 2,) shows the upper portion of a young tree of the Scotch pine, as it often appears after a rapid growth; *a* is the place where the shoot should be cut the first summer of its growth, where it will form new buds, and the next season throw out a tuft like that shown at *b*.

Bissell & Salter's nursery, nearly opposite that of H. E. Hooker & Co., is not extensive, and is devoted chiefly to the propagation and culture of the American varieties of the grape, and the smaller fruits generally; for the former it has become widely known, and maintains an extensive correspondence. The grape is largely propagated by grafting. Many thousands had already been worked in this way the present winter. Being subjected to a bottom heat under glass sash, they were already making some growth. They are transferred to other pots once, before being set out into open ground, and make good saleable plants by next autumn. As this mode of propagation is rather new, we give our readers a simple figure showing how the operation is performed. (Fig. 3.) The cleft is made in the short graft, and a small root, an inch and a half long, inserted. The parts are bound well together by strips of waxed paper, leaving a small portion of the lower end of the graft open, for the free emission of roots.

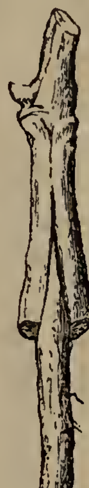

Fig. 3.

Bissell & Salter heat their houses wholly by shallow tanks—having no heating pipes like those of T. C. Maxwell & Co., nor any brick flues, as in the houses of H. E. Hooker & Co. To effect this object their water is heated nearly to boiling; and the bottom of the tank being made of lead, some heat is given off below; and the tops being covered with slate, a large portion passes off above, the slate being exposed, and the box containing the sand bed for the pots being raised a few inches from the tile, to allow the heated air to flow out into the apartment.

The nursery of A. Frost & Co., near the southern boundaries of the city, contain as we are informed, nearly 300 acres, but not finding either of the proprietors at home, we were unable to examine them properly. They have good green-houses of moderate extent.

Ellwanger & Barry, near Mount Hope, occupy over 500 acres planted with nursery. About one-half of their land has required underdraining, and they have accordingly ditched it thoroughly. In doing so, they have laid between 60 and 70 miles of tile. The result has been highly satisfactory. One piece of land of some 20 acres was wholly unfit for any purposes of cultivation, but draining has made it the finest and most valuable piece of land they have. It had long been enriched by the wash of higher ground, but its fertility had been inaccessible by being partly buried under water. Late the past autumn their common laborers drained wholly by hand a very wet piece of 20 acres in *ten days*.

The proprietors have eight large glass structures, mostly propagating and green-houses, densely filled with plants. One is occupied exclusively for wintering roses, and contained about 11,000 pots. The glass roof being quite low, it is easily kept warm by a single pipe from an adjoining structure, passing but once around near the exterior. They propagate the grape extensively by grafting.

They have given much attention to the cultivation of weeping ornamental trees, and by a little care trained them into more perfect forms than the trees naturally assume. We present a sketch by way of illustration—fig. 4 showing the common way in which the new weeping willow (worked standard height) usually appear after the lapse of a few years; and fig. 5 is a portrait of a tree in sight from their office windows, trained into a fine umbrella shape, by simply tying hoops beneath, as shown by the dotted lines. The branches by growth become stiff enough to sustain their own weight, and the hoops are then removed.

They have not been excelled, if equalled, by any establishment in America in proving new varieties of fruit, and especially pears. Among the newer sorts of winter varieties, they are much pleased with the *Josephine de Malines*. They showed some fine specimens of this variety, and gave it as their opinion that the fruit would keep as long as the Easter Beurre. It is not so highly flavored as some other winter sorts, but there is a softness and delicacy both in texture and flavor, that must render it a favorite with many.

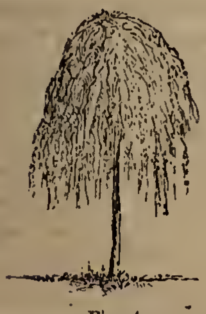
Fig. 4.

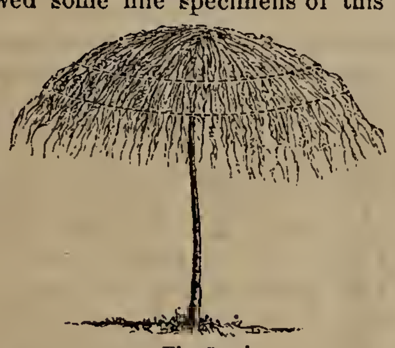
Fig. 5.

About 50 men are constantly employed during the present winter, and, of course, many times this number in spring and summer. This great establishment is regarded as the largest in the world, and it has become highly celebrated for the completeness and excellence of its stock, and for the energy, system and accuracy with which it is conducted.

We have stated many facts which are doubtless familiar to experienced propagators, but to others we trust some of the information may be interesting and valuable.

Borrowed garments seldom fit well.

"WINTER CARE OF CATTLE.

Eds. Co. Gent.—In looking over our agricultural papers, we find much of valuable information and useful suggestion, sometimes mixed with things to which we cannot fully subscribe. On the latter we have offered comments occasionally, and would do so in the present instance—offering no views, however, but those tested by experience. Three "practices" in the winter care of cattle, are characterized by a New-England writer, as *wasteful*, *cruel*, and *foolish;* we cite them below.

1. Feeding out Cornstalks.

"The practice of scattering fodder, especially cornstalks, on the ground or snow, is very wasteful."

Granted, if the ground is muddy, or the snow melting and slushy—otherwise not. On hard-frozen ground or snow, if properly fed out, (always unbound, and placed in even portions around the yard,) cattle will eat cornstalks with less waste than from any manger ever constructed. Especially is this true if cattle are, as recommended by this writer, fed in stalls without fastening, as they will almost always in tearing the leaves from the stalks step back from the manger, and drop the stalk partly eaten outside, and then step on it as they go to the manger for another. On hard frozen ground, or a good stiff, dry sod, the cattle do not often refuse that trodden upon, as they almost invariably do in the stall. Straw and coarse hay is more conveniently eaten from racks and mangers, and in wet or thawy weather should never be fed upon the ground.

We have wintered cattle largely upon cornstalks, and have tried various methods of feeding cattle, and it is our present practice to feed most of our stalks on the ground; those we feed to calves kept loose in stalls with mangers, and those fed to cattle tied in the stable, being less fully consumed than those fed around the yard, or in warmer weather on a firmly sodded field. In rainy weather, we feed hay and straw, in racks and mangers under sheds, and usually feed such fodder always in that way, or in the stable.

Stalks should always be unbound when fed out on the ground, however small the bundles may be, if a number of cattle are fed together, otherwise the bundles will get drawn into heaps, as the cattle drive around the yard, and the underlings will lose their proper share.

2. Fastening Cattle in Stalls.

"Cattle should never have their heads confined by ropes, bows, or stanchions; it is a cruel practice."

We cannot imagine in what the cruelty consists, and the writer gives no reason for the denunciation. If cattle were *lousy*, it would be cruel to keep them fastened so that they could not lick or scratch themselves, unless they were given a daily currying. It is the opinion of some of our best cattle-feeders, that stock should be allowed the liberty of the yards and sheds at all times during the day, except when taking their food, and at that time it matters little how they are fastened, if only so that they can take their meals comfortably and lie down at ease if they desire to do so. Some reasons why we would tie cattle are hinted at in the preceding section; another is that they will keep cleaner than if allowed more liberty of movement. It is also less trouble to take care of them.

3. Feeding from Straw Stacks.

"Another foolish practice is to allow cattle to feed themselves from straw-stacks."

On this we would only observe, that if cattle are to *eat straw*, they will eat more, enjoy it better, and waste less, when allowed to help themselves from a well built straw-stack, than in any other way—unless it be cut, mixed with meal and soaked or steamed in hot water, which is not generally done among common farmers. Both cattle and sheep like to help themselves, and seem to eat most heartily that which costs them a little trouble to obtain. Still we would not put obstructions in the way of our stock to prevent their getting plenty of good food, but we are perfectly willing they should help themselves to all the straw they desire.

A Reading Farmer.

[For the Country Gentleman and Cultivator.]

CURE FOR THE HORN-DISTEMPER.

Messrs. L. Tucker & Son—I notice in the Co. Gent. of Jan. 31, a statement from S. Willson of Illinois, saying he has an ox ailing since last harvest—that he coughs continually, and he wishes to know if there is any cure for him. My answer is yes—bore both his horns at once, and put in with a syringe, pepper, salt and vinegar, steeped strong, every other day for ten days, and his ox will recover if he has not let him go too long.

I keep quite a large stock of cattle, and I used to think that none but poorly cared for cattle would ever be troubled with the horn-distemper; but I have had as fat cattle as I ever owned, taken with the horn-distemper, and they are usually taken coughing, groaning, and apparently troubled to breathe. In some instances I have been obliged to cut off both horns to save the life of the animal. I had a very fine heifer from Kentucky, which was taken with the disease, and I was not willing to take off her horns, but she had been so long with the disease that boring was not sufficient. She finally became blind, and was past getting up alone, when I resorted to cutting off her horns. I cut off one first, and after it had been off about twelve hours, the eye on that side began to show signs of seeing. I then cut off the other horn, and in three days her eyes were as well as ever. She soon began to eat, and fully recovered, and is at this time one of the best milkers in my dairy of seventy cows. All that is necessary when the horn is cut off, is to fill it up with tar and bind a rag over it until it heals. For all sickness or difficulty in my herd of cattle, except they get their legs broken, I bore or saw off the horns. A. M. C.

St. Albans, Vt.

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[For the Country Gentleman and Cultivator.]

Use of Plaster in Otsego County.

— One thousand tons of plaster will be distributed in the circumference of fifty miles, and it is the cheapest fertilizer we can get—it costs $4 at the mill. It is well adapted to our soils, and indispensable in the production of corn and potatoes. Every year increases its quantity and unfolds its relative value; still it is limited in its application, because it costs a little something; and farmers, blind to their own interest, will toil on, scarcely making both ends meet, exhausting the soil and starving their cattle and themselves. When if, on the contrary, a few dollars were expended in plaster, and sowed at the rate of one bushel per acre on sidehills, barren knolls, and back lands inaccessible to manure, and pastured with sheep, they would soon find those barren fields covered with the richest verdue; and occasionally changing to cattle or colts, will be found beneficial.

On such fields I have found that cows do better, and make the best butter and cheese. In fact it is the most profitable way to manage such lands, and when fields have been exhausted by continual cropping, if too poor to bear clover, sow buckwheat, and plaster it soon after it comes up, which will, when turned under and followed by clover the same way, in a short time be made productive.

I am speaking of those lands where farm-yard manure is not to be had. But there need not be such a vast amount of unproductive land in our county, if farmers would pursue a systematic course, and instead of plowing over a large territory and getting a half crop, often less, plow what can be done well and manured. Seeding down the second year will enrich the land, and bring more returns with less labor.

I will close this article by adding what I think would prove beneficial, and which I have found by experience, that *perseverance*, applied at the rate of ten or twelve hours a day, with the knowledge of a good agricultural paper, will secure the most beneficial results.

Otsego Co., N. Y. H. P. NORTON.

[For the Country Gentleman and Cultivator.]

QUERIES ABOUT CHEESE-MAKING.

Eds. Co. Gent.—Will you, or some of your readers, give me some information through the Co. Gent. in regard to some things in the manufacture of cheese.

I make from 4,000 to 5,000 pounds of cheese per annum. Now I have bought all the books that I know of that pretend to give information on the subject; and all that I read does not inform me what effect or influence certain parts of the process has on the cheese.

1. Some parties do not cook the curd at all. Others scald from 30 to 40 minutes, at a heat of 100° to 108°. Now what influence does that bear upon the cheese?

2. Does curd that has come quick or hard require as much cooking as that which has come soft?

3. Will not curd that has come soft, or has been 50 to 60 minutes in coming, produce more pounds of cheese to a given quantity of milk than that which has come in 30 minutes, hard? My experience leads me to think it does.

4. Will an excess of rennet, if it be sweet, ever make cheese smell or bear that bad taste called rennety?

5. I am much troubled to keep my cheese, when green, from moulding. I turn and rub with butter daily. Now some parties do not dress with butter at all.

6. Some of my cheese will be full of cracks, while others are not.

I am gradually taking up the system of soiling. I keep an exact account of my dairy, of the raising of pork, and the expense of my cows; also the shrinkage of cheese, the quantity of milk to a pound of cheese, &c., which, when I have tested to my satisfaction, I will give to your readers, if you think it would interest them.

I have fed out to my cows the past season some 250 bushels of beans, and three tons of cotton seed meal.

Lyme, Ct. M. L. C.

We hope some of our cheese-making readers will furnish an answer to our correspondent's inquiries, and we assure him we shall be pleased to receive the details of the management of his dairy, to which he alludes.

◆

Estimating Weight of Hay in Bulk.

Messrs. Tucker & Son—In your Co. Gent. of 20th Dec., a subscriber asks for information in regard to measuring hay in stack or barn. I have just sold a bay of hay of the following dimensions, and it weighed out just eight tons, 2,000 lbs. a ton—19 feet square, 14 feet high—it was well tramped in, and was filled up full, so that it measured as above after it had settled. You will see by making a calculation, that it takes about 600 cubic feet in this case to make a ton. The hay was, say half red-top, balance timothy and clover, with but little clover. It was full as heavy as if it had all been timothy. I have bought and sold a good deal of hay by weight, and find that nine times out of ten, neither a stack or bay, or even a load of hay, will weigh as much as generally estimated.

We have had as yet but little cold weather, but cloudy and unpleasant two-thirds of the time for the last six weeks. W. Edwards. *Tennessee*, *Dec.* 29, 1860.

◆

Out-Fall Drainage.—We have no law whereby owners of lands on lower grades than those of their more enterprising neighbors, can be compelled to *drain*, that *all* may be mutually benefitted, which is doing much injury to the agriculture and beautifying of our whole State, and no doubt such a statute, judiciously guarded, would be generally advantageous without injustice to any. J. W. *Clyde*, *N. Y.* [This question is one of much importance, and should attract the attention of our Legislature. Though but little has been said about it in this country, the English Agricultural journals have for some time past been largely occupied in the discussion of the subject, and meetings have been held in England and Scotland, and committees appointed to apply to the government for a "general drainage and out-fall law."]

Dairy Farm of Hon. Zadoc Pratt, Greene Co.

This farm, situated in Prattsville, N. Y., contains 365 acres, forty of which are fine alluvial soil—the residue, what is called hemlock land, (loam and gravel,) lying on the eastern slope of the Catskill Mountain. The hemlock was originally cut for the purpose of obtaining the bark for use in Col. Pratt's tannery, and the land afterward cleared up, seeded down, and fenced with stone wall, and the whole converted into a Dairy Farm, upon which 50 cows have been kept throughout the last five years. Accurate accounts of the management, products and expenses of this farm, for the years 1857, 8 and 9, have been published in the Transactions of the New-York State Ag. Society; and Col. Pratt has kindly furnished for the Country Gentleman the following interesting statement, embracing the entire statistics for four years—1857 to 1860:

Statistics of Hon. Z. Pratt's Dairy Farm for the usual season of about eight months, for the years 1857, '58, '59 and '60—Fifty Cows of what are called native breed, being kept each year:

	1857.	1858.	1859.	1860.
MILK.				
Whole weight—lbs.,........	254,736	260,450	240,700	217,736
Or gallons,...............	31,842	32,556¼	30,087	26,276
Aver. for each cow—lbs.,	5,094.48	5,209	4,814	4,354.75
Or gallons,.......	636.31	651.12	601.74	525½
Average per day—lbs.,...	1,044	1,067½	982½	888.72
Or gallons,...............	130½	133.4	122⅔	107.28
Av per day each cow—lbs	20.80	21.30	19.65	17.77
Or gallons.............. ..	2.60	2.70	2.45	2.14
Gt's av. per day per cow,	24.18	31.50	28.35	25.60
Or gallons,...............	3.25	3.31	3.53	3.4
BUTTER.				
Whole no. pounds made,	6,500	8,050	8,300	9,143
Average per cow—lbs.,...	130	161	166	182.86
Average per day—lbs., ..	26.61	33	33.92	37.72
Av. per day per cow—oz.	8.50	10.56	10.84	11.94
Av. milk to 1 lb butter-lbs	39.20	32.33	29	23.30
Or quarts,...............	20	16.16	14.50	11.20
PORK.				
Whole amt. p'rk made-lbs	4,627	7,403	6,455	6,516
No. pounds for each cow,	92½	148	129	130.30
Which realized per cow,.	$6.56	$8.42	$8.36	$9,12
Amt. realized for each cow from butter,.......	30.95	38.48	41.40	42.97
Total receipts per cow,..	37.51	46.90	49.76	52.09
SUMMARY.				
Received for butter,.....	$1,547.54	$1,924.02	$2,070.00	$2,148.89
do. pork,......	328.16	421.08	418.00	456.12
do. calves,....	......	......	......	80.00
	$1,875.70	$2,345.10	$2,488.00	$2,685 00
Expenses for working farm, including $700 for each year, for interest on investment for farm and stock, $10,000,.....	$1,415.50	$1,380.50	$1,550.00	$1,125.75
Net profits above interest,	$460.20	$961.60	$938.00	$1,359.26

Allow me also to present the following table, showing the relative weight and strength of milk obtained by actual weight and measurement on the first day of each month, the milk being kept separate, and the butter weighed:

	Qts. to make 1 lb. Butter.	Weight per gallon.
May 1, 1860,........................	12.96	7.91
June, ...	11.43	8.28
July..............................	12.14	8.30
August, ...	11.35	8.66
September, ...	11.83	8.09
October, ...	9.28	8.53
November, ...	8.21	7.56

The feed was two quarts provender per day, (corn in the ear, ground with oats and buckwheat,) and hay from Feb. until May 10; grass alone until October 10, when we commenced feeding pumpkins; our milk-room was at as uniform temperature as possible, but may have varied some 10 degrees in the hottest weather.

The above table shows quite a difference in both the strength and weight of milk, which we are unable to account for, as the weather and feed has been remarkably uniform through the season. Can any one tell us the cause?

We have raised on a little over five acres, 367 bushels shelled corn, (being 64½ bushels per acre,) 70 loads pumpkins, and about 49 tons cornstalks—which we find to be a profitable crop.

PROCEEDS OF CORN.

367 bushels, worth here 7s. per bushel,..............	$321.13
70 loads Pumpkins, 12s............................	105.00
Net profit,..................................	$426,13

As the stalks well paid us for our labor—fed the last Jan. 15th, without cutting up.

We have also raised 150 bushels of oats, or about 40 bushels per acre—100 bushels rye, or 30 bushels per acre, and 1,200 bushels turnips from one acre; our hay averaged 2½ tons per acre, grass and clover.

We milk about 50 cows morning and evening; set about 2½ quarts of milk in warm, and 3 quarts in cool weather, per pan on racks—keeping the milk-room as near 62 to 65 degrees as possible. The cream only being churned in a barrel-dash churn by water; the butter after first working, is placed in pans and set on a cool stone floor in the cellar until the next day, and then worked in the usual way. One ounce Ashton's salt per pound worked in, then packed and set in a cool dry cellar, on two joice three inches high, (so that the air can circulate under,) a cloth put over the butter and cover with coarse Turks' Island salt washed clean, and over all a flat round stone cut to cover the firkin.

Our aim has been not so much to excel others as to improve ourselves, and we flatter ourselves that our figures show that we have so far succeeded.

In this connection allow me to say to that class of my brother farmers who are plodding on in the steps of their forefathers—with nothing to guide them, except that they have heard that their grandfathers had done so and so, in this or some other section, with no knowledge of profit and loss resulting from the management of their farm, except from the few dollars they may have in their pockets at the end of the year—that it is time for you to make and determine by actual experiments, what crops pay you the best, and what course of treatment your particular soil requires, for as soil varies, so must its treatment if you would get the greatest net returns; that you should determine what kind of stock your lands are best adapted to, and what kind of treatment such stock requires, and endeavor to obtain that knowledge in your business which will enable you to do everything understandingly, leaving money in the bank.

And above all let me say to you, do away with the popular idea that the business of farming is degrading, for it is the manner in which it is done that makes it not only honorable, but the most ennobling pursuit you can follow, and it is in your power to make it the most pleasant. Do not use your hands alone, but let your head be also used to lighten and guide your labors. "Knowledge is power" as truly to the farmer as to any other class of community.

Z. PRATT.

* * *

[For the Country Gentleman and Cultivator.]

JEFFERSON COUNTY vs. VERMONT.

Messrs. Editors—In Co. Gent., Jan. 17, present vol., is an extract from St. Albans (Vt.) Messenger, of amount of butter and cheese shipped for four years past from railroad station at that place, and a request for figures in reference to the amount shipped from any station that may out-do St. Albans. In 1858 there was shipped of Jefferson county butter and cheese, over the Watertown and Rome railroad, as may be gathered from the Viewing Committee's Report of the Jefferson Co. Ag. Society for 1859, 5,676,695 lbs. butter; 5,029,940 lbs. cheese. 124,500 lbs. butter and 118,000 lbs. cheese, were shipped by water the same year. By far more than one-half of the above amount was shipped from the railroad station at Watertown. We have figures for one year only.

Jan. 10, same vol., we learn through C. T. A. that the number of inhabitants in Wilmington, Vt., is about 1,300, and there is about that number of papers distributed through the post-office at that place. C. T. A. also calls on others for figures. From a correct list kept by the Viewing Committee above mentioned, we learn they visited 37 families in the discharge of their duties, and found on an average a fraction less than five weeklies to each family. The families visited were all farmers, and would not average more than five to a family.

Vermont is a great nation, but the farmers of Jefferson County claim to be somebody. Daniel Parker,

Watertown, N. Y., Jan. 1861. Ch'n. Viewing Com. 1859.

Winter Meeting New-York State Ag. Society.

The Annual Meeting of the New-York State Agricultural Society was opened at the Assembly Chamber on Wednesday the 13th—the President, Hon. B. N. HUNTINGTON, in the chair. Owing to the obstruction to travel in the breaking up of the Mohawk, Hudson, and other streams, the attendance was less general than has sometimes been the case. The first business was the presentation of the Treasurer's Report, a summary of which we give:—

Luther H. Tucker, Treasurer, in account with the New-York State Agricultural Society:

Dr.	1860.
To cash on hand at date of last report,	$5,686.07
Annual memberships received,	103.00
Life memberships received,	200.00
Premium returned,	10.00
State appropriation for Entomologist,	1,000.00
do do for Society,	700.00
Cash from Elmira local committee,	1,200.00
Net receipts of Elmira Fair,	9,042.95
Rent of refreshment stands at Elmira Fair,	500.00
Interest received on cash on hand,	121.80
	$18,563.82

Cr.	1860.
By cash payments as follows:—	
Premiums at Winter Meeting, 1860,	$533.00
Expenses at Winter Meeting,	61.73
Survey of Onondaga county,	300.00
Premiums of previous fairs,	539.75
Expenses of previous fairs, including settlement of Albany claim of 1859,	1,256.43
Salaries and travelling expenses,	3,012.31
Salary of Entomologist, Dr. Asa Fitch,	1,000.00
Expenses of Library and Museum,	146.07
Postage account,	181.02
Incidental expenses,	199.68
Printing, advertising and stationary,	614.69
Expenses of Elmira Fair,	3,635.94
Premiums at Elmira Fair,	5,290.49
Cash on hand to new account,	1,792.71
	$18,563.82

The account is certified correct by the Finance Committee, and, on motion of Mr. PETERS, the Report was accepted and adopted.

Mr. Secretary JOHNSON then read the Report of the Executive Committee, in which, as usual, the prominent features in the Agricultural History of the preceding year are referred to at considerable length.

Mr. CORY offered a resolution for the usual Committee to nominate officers, and fix upon the place for holding the next Fair. Adopted, and the following names handed in by the members from the several districts:—

First District—E. G. Faile, John Haven.
Second District—W. T. McCoun, C. S. Wainwright, Luther Caldwell.
Third District—Luther Tucker, Amos Briggs, Norton S. Collin.
Fourth District—J. A. Corey, Nathan Lapham, W. W. Rockwell.
Fifth District—James A. Bell, John Butterfield, Squire M. Brown.
Sixth District—Jeremiah Dwight, Asa Pellet, F. M. Rotch.
Seventh District—J. O. Sheldon, H. T. E. Foster, Benj. Birdsall.
Eighth District—T. C. Peters, Franklin Philbrick, Woolsey Johnson.

Mr. PETERS moved that a Fair be held, next July, in Canandaigua, or some other point in the interior of the State, for the trial of Agricultural Implements. [Laid over.

The Committee of Twenty-four agreed on the following report:—

PRESIDENT,
GEORGE GEDDES of Onondaga.
VICE-PRESIDENTS.

1. John Jay of New-York.
2. Benjamin F. Camp of Westchester.
3. Herman Wendell of Albany.
4. John A. Corey of Saratoga.
5. S. D. Hungerford of Jefferson.
6. Ezra Cornell of Tompkins.
7. D. D. T. Moore of Monroe.
8. Samuel W. Johnson of Cattaraugus.

CORRESPONDING SECRETARY—B. P. Johnson of Albany.
RECORDING SECRETARY—Erastus Corning, Jr., of Albany.
TREASURER—Luther H. Tucker of Albany.

EXECUTIVE COMMITTEE—T. C. Peters of Genesee; N. Lapham of Clinton; John Winslow of Jefferson; E. Sherrill of Ontario; Samuel Thorne of Dutchess.

Watertown being the only place which applied for the next Annual Fair, it was "*Resolved*, That the subject of selecting the place for holding the next fair be referred to the Executive Committee."

The Report of the Committee on Nomination was accepted at the Afternoon Session, and the officers as given in the above list were elected. The resolution offered in the morning by Hon. T. C. PETERS, respecting the holding of an Exhibition for a trial of Agricultural Implements, was amended so that the Exhibition be held in July or August, and, on motion of Hon. WILLIAM KELLY, referred to the Executive Committee.

The Society met again, at 7½ o'clock, evening, in the Assembly Chamber.

Dr. ASA FITCH, Entomologist to the Society, read an interesting paper on the entomological peculiarities of the past season, some of the suggestions contained in which we regard as so important, that we shall hereafter publish Dr. F.'s remarks at length, in the columns of the COUNTRY GENTLEMAN.

Mr. J. STANTON GOULD of Hudson, followed with a paper on Grasses, and their Cultivation. [Adjourned.]

During the following day discussions were held at the Society's Rooms, Ex-President CONGER in the chair. Although the attendance was limited, the questions under consideration were talked over in an instructive and interesting way.

During the day the Exhibition at the Rooms was frequented by numerous visitors. The articles shown, like the attendance, were less numerous than has sometimes been the case, but the quality of the Dairy Products, Fruit, Grain, &c., was such as to meet with high commendation. The following is the list of awards:—

PREMIUMS AWARDED.

GRAIN FARMS.—1st. A. B. Benham, Dryden, Tompkins, Co., $50.

BUTTER DAIRY FARM.—1st. Robert Harvey, Leyden, Lewis Co., $50.

CHEESE DAIRY FARM.—1st. Leonard S. Standring, Deer River, Lewis Co., $50.

DRAINING.—A. H. Buck, Lowville, for draining Peat Swamp, $10.

DISCRETIONARY.—A. H. Buck, Lowville, Lewis Co., Cheese Dairy Farm, S. Medal...Hiram Olmstead, Walton, Delaware Co., Butter Dairy, $10.

AGRICULTURAL STATISTICS.—Tompkins Co. Ag. Society, for Ag. Statistics of the county, $30...Ithaca Farmer's Club, do. of the town, $20.

SPECIMENS OF GRASSES, pressed.—Mrs. Isaac Clement, Mechanicsville, 100 varieties, $15.

FIELD CROPS.

SPRING WHEAT.—Best crop, Clift Eames, Rutland Jefferson Co., 3 acres and 52 rods, 101 bushels, $15. Hiram Olmstead, Walton, Delaware Co., presented a crop of 57¼ bushels, raised on 2 acres and 18 rods. The crop did not reach the requirements of the Society as to amount per acre, (30 bushels,) therefore not awarded any regular premium, Trans.

RYE.—Best. C. L. Kiersted, Kingston, Ulster Co., 2 acres, 86 bushels, $15...2d. C. L. Kiersted, do. do. 6 acres and 5-100, 198 bushels, $10.

BUCKWHEAT.—C. W. Eells, Lairdsville, Oneida Co., 1 acre 4 p., 31 9-48 bushels, $8. Hiram Olmstead, Walton, Delaware Co., raised 31⅜ bushels buckwheat, on 112 rods land. The amount of land required to be cultivated was 1 acre. His fell short in the amount of land, but the yield of grain exceeded the amount required for an acre. Awarded a discretionary premium of $6.

BARLEY.—Best. Hiram Mills, Lowville, Lewis Co., 2 acres, 103¼ bushels, $15.

OATS.—C. L. Kiersted, Kingston, Ulster Co., 3 and 54-100 acres, 308½ bushels, $15...2d. Ira R. Peck, East Bloomfield, Ontario Co., 15 acres, 1,284 bushels, $10.

PEAS—Best. E. C. Peck, East Bloomfield, Ontario Co., 1 88-100 acres, 92 bushels, $8.

SPECIAL PREMIUMS.

C. L. Kiersted, Kingston, Ulster Co., grass crop, 4 tons 1,720 pounds per acre, Trans...Solomon Walrath, Clinton, St. Lawrence Co., Scotch wheat, Trans...Solomon Walrath, Canton, St. Lawrence, Co., Bradford Wheat, Bridgman.

The committee on "ROOT CROPS" report as follows, after having examined the several statements presented by the competitors.

1st. Sylvanus Burtis, Oaks Corners, Ontario Co., 1 acre Potatoes, 264 bushels, $8...2d. E. S. Hayward, Rochester, 1 67-100 acres Potatoes, 349 bushels, $5.

DISCRETIONARY.—Hiram Olmstead, Walton, Delaware Co., raised 955 bushels ruta bagas from 135 rods land, and 254 bushels carrots from 44 rods land, $8.

Although Mr. Olmstead's survey does not show that the quantity of land occupied in raising both the crops of Ruta Baga and Carrots amounted to the area designated in the rules of the Society, and hence in that fails to come within the rules, but does, nevertheless, exceed the limits of the product on a larger quantity of land, which justly entitles him to the appellation of a "good farmer," and the committee recommend a premium on both crops.

The committee exceedingly regret to see the meagre competition in this department of farming in the Empire State, as the liberal premiums offered, and the spirit of emulation which ought to be aroused, should be sufficient inducement to the farmers of the State to fill the capacious Agricultural Rooms with products at each annual meeting, to its utmost capacity. The farmers of the State should not relax their efforts at well-doing, but redeem themselves from stolid indifference, by competition and comparison in the various products of the farm and the garden, and join in the effort to advance their calling.

GRAINS AND SEEDS.

(One bushel of Grain exhibited of each variety.)

WINTER WHEAT.—Best. A. I. Pine, Pittstown, Rens. Co., $3...2d. C. W. Eells, Lairdsville, Oneida Co., $2...3d. E. S. Hayward, Rochester, $1.

SPRING WHEAT.—Best. C. W. Eells, Lairdsville, Oneida Co., $3...2d. A. I. Pine, Pittstown, Rens. Co., $2...3d. D. W. C. De Forest, De Friestville, Rens. Co., $1.

RYE.—Best. E. S. Hayward, Rochester, $3...2d. A. I. Pine, Pittstown, Rens. Co., $2.

BARLEY, 4-ROWED.—Best. Hiram Mills, Lowville, Lewis Co., $3...2d. C. Oaks, Oaks Corners, Ontario Co., $2...3d. H. Wier, Johnsonville, Rens. Co., $1.

BARLEY, 2-ROWED.—Best. A. H. Buck, Lowville, Lewis Co., $3.

DISCRETIONARY.—E. Merriam, Leyden, Lewis Co., Russian Barley, Trans.

Discretionary.—Oliver Van Valen, Cortland. Cortland Co., 1 quart English turnip seed, Trans...Mrs. H. Wier, Johnsonville, Rens. Co., 15 varieties Corn in the ear, Downing...Samples "California" and "Broom Corn" Millet, Trans.

BUTTER.

Best 3 tubs Butter. J. S. Holbert, Chemung, $15...2d. Mrs. E. Merriam, Leyden, Lewis Co., $10.

Butter Made in June, Aug. and Nov.—Best 3 tubs, Wm. Pugh, Turin, Lewis Co., $15.

Winter Butter.—Best. Clift Eames, Rutland, Jeff. Co., $5...2d. A. I. Pine, Pittstown, Rens. Co., $3...3d. C. W. Eells, Lairdsville, Oneida Co., Trans.

CHEESE.

Best. Clift Eames, Rutland, Jeff. Co., $15...2d. Moses Eames, Rutland, Jeff. Co., $10.

FRUITS.

Apples.—Best collection, 40 varieties, Ellwanger & Barry, Rochester, $4...Best 16 varieties, Wm. H. Slingerland, Normanskill, Albany Co., $3...2d. A. I. Pine, Pittstown, Rens. Co., Barry and $1...Best dish, D. W. C. De Forest, De Friestville, Rens. Co., S. S. Medal.

Pears.—Best collection, 41 varieties, Ellwanger & Barry, Rochester, Dip. and S. Medal.

Best variety of Grapes.—Robert P. Wiles, Albany, S. S. Medal,

Wine.—Dr. Presbrey of Buffalo exhibited samples of Isabella Wine, 2 years old, which was highly commended by several gentleman judges of wine. and awarded a Silver Medal...C. N. Bement, Po'keepsie, was awarded Silver Medal for Apple, Catawba and Currant Wines.

DISCRETIONARY.

D. A. Bulkeley, Williamstown, Mass., 18 varieties Corn in ear, Downing...Samples Seedling Potatoes, yield last season 584 bushels per acre, Bridgman.

Wm. H. Slingerland, Normanskill, Carrots and Mangel Wurtzel, Trans.

D. L. Halsey, Victory, Cayuga Co., 3 Rouen Ducks, "dressed," S. Med.

N. Van Auken, Cohoes, Van Auken's Washing Machine, S. S. Med.

Marcus Pratt, Ireland's Corners, Albany Co., Victor Straw Cutter, S. S. Med.

Miss Lucy N. Andrus, Turin, Lewis Co., Pencil Drawing Lewis Co. Fair Buildings, S. S. Med.

D. B. Prindle, East Bethany, Corn-Planter, S. S. Med.

ESSAY ON IRRIGATION.

A valuable practical Essay on Irrigation was presented, and is in the hands of the Committee on Essays, and the Essay will appear in the Transactions with report of the Committee.

Thursday evening the Society was again convened, President Huntington in the chair. The first business was the reading of the foregoing List of Prizes. A communication was received from the Governor, by his Private Secretary, acknowledging the invitation of the Society to attend at its sessions, and expressing his earnest approbation of its objects.

The President, Hon. B. N. Huntington, next delivered his Address, on retiring from the duties of the chair, reviewing the operations of the year, and concluding with some hints of practical importance to the farmers of the State. He then introduced the President elect, Hon. George Geddes, who addressed the Society.

On motion of Mr. Conger, the thanks of the Society were presented to the late President, Mr. Huntington, for the faithful discharge of his duties, and for his address of this evening.

Hon. Mr. Conger then addressed the Society on the subject of the Pleuro-pneumonia, and offered the following resolution:—

Resolved, That the intelligence of the existence of this disease in the vicinity of the city of Albany, be referred to the Executive Committee, and that they be requested to make such investigation of the same, and take such action in regard to it as in their judgment the great importance of the subject to the State of New-York requires.

This resolution was debated by Messrs. Peters, Johnson, Prentice, Wood, and Bathgate, and adopted.

On motion of Mr. Wainwright, the thanks of the Society were presented to the Secretary for the admirable discharge of his duties during the preceding year, after which an adjournment was voted.

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DEATH OF CHERRY TREES.

Can you tell me what causes my dwarf cherries, of the Early Richmond variety, to lose their bark on the side which is exposed to the sun? I planted 150 trees of three varieties—Early Richmond, May Duke and Large Morello, and have never lost a tree of the last two mentioned, while eight or ten of the Early Richmond die every year. Is it because they [illegible] they are budded on Mazzard stock? I don't know that they are; I merely suppose so from reading the remarks of Mr. Townsend in your issue of Jan. 17, that some varieties do not succeed well on Mazzard stock.

Nashville, Tenn. J. B. K.

The Mazzard and Heart cherries do not succeed in the western or south-western portions of the country. The Early Richmond being a slow growing (although very hardy) sort, is probably worked standard height on Mazzard stocks—if this is the case, it is this kind of stock no doubt that perishes. Whether this is so, or whether the Early Richmond bark itself is affected, the best remedy is to drain thoroughly and to cover the stems from the sun and winds, by low branching. It may not be practicable to accomplish this with the trees now planted out, but it may be with others in future. Shading the stems by tying straw on loosely, may be useful, but we cannot promise much from it, if the Mazzard stock has been used and worked at some height. We should have more confidence in thorough underdraining.

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[For the Cultivator and Country Gentleman.]

EXTRAORDINARY YIELD OF HONEY.

Messrs. Tucker—I beg leave to communicate for your columns a remarkable achievement of a swarm of bees, owned by me, last summer.

On the 9th of June last, a large and strong stock came out of a hive two years old, and were put into one of Eddy's Patent Hives that had been left with me on trial by one of Mr. Niver's agents. Being suspicious of all sorts of patent improvements and humbugs that go about the country begging a market, and this hive seemed so plainly constructed, so simple in principle, and so nearly like some I already had, that it was only after the most urgent solicitation and strong assurances that I consented to try it.

Upon examination a week after the bees were put in, I found the hive nearly filled with nice new comb and a large portion of it filled and capped over.

I then opened the boxes above the body of the hive and the bees at once commenced operations in them. A few days after I was surprised and pleased at the rapidity with which they were being filled. At the end of the season I had taken off eight boxes of honey, weighing in the aggregate *seventy-four pounds*, exclusive of weight of boxes. The yield was obtained without feeding or any artificial process whatever, or extra care on my part, except to see that ample working room was constantly supplied. Many persons have inquired if I have not robbed my bees of their winter's supply. To-day, 16th of February, I have weighed the hive and contents, and find the weight to be sixty-two pounds—the bees when disturbed are active and numerous. I did not take the precaution to weigh the hive before putting the bees in, but think it could not have weighed more than thirty pounds. I think the honey will hold out till spring opens.

I attribute the large yield from this swarm to the following causes:

It was a large and healthy swarm.

It was hived early, 9th of June.

The construction of the hive is such that the bees have ample and easy access to the boxes.

Some of my other hives yielded from five to twenty-five pounds each, those yielding most that were nearest like the Eddy hive in its peculiar structure. Wm. H. Rice.

Caughdenoy, Feb. 16, 1861.

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[For the Country Gentleman and Cultivator.]

Welsh Rarebit.

If any reader of the Country Gentleman wants something good to eat—take a teaspoonful of mustard, half a cup of milk, and a little salt; put in a sauce-pan, and add half a pound of mild cheese; put over a brisk fire and stir until the cheese and milk are thoroughly mixed. Pour on a slice of nicely toasted bread, and, by all means, serve. Hampden.

◆

[For the Country Gentleman and Cultivator.]

To Remove Ink Spots.

I send you a *domestic* receipt for extracting ink spots from *colored* articles of linen, wool, and similar fabric. It is simply to rinse the part so stained, in fresh milk, changing the milk as often as necessary until it, the stain, disappears. As a finale, wash out the milk in pure rain water.

Fairfield Co., Conn., Feb. 11, 1861. T. AUSTIN.

PROFITS OF FARMING.

——, WISCONSIN, JANUARY, 11, 1861.

MY DEAR SIR—I am afraid my friend —— has unwittingly led you astray on the subject of my success as a farmer. It is true I have a farm, and have at different periods carried it on, but have never lived on it. My mill is on my farm, and in connection with my mill I have raised crops for fatting cattle and hogs, and have raised flax to some extent for the seed alone, making the seed into linseed oil in my mill. This I have done, hiring all my labor, and furnishing teams and materials. But of the real hard work, and watchful care, and self-denial, together with the untiring industry that of necessity belongs to the successful farmer, I am almost entirely ignorant. Except when a farm is large and capital at command, I consider farming the most laborious and least profitable of almost any branch of labor. If I could cultivate 2.000 or 3.000 acres of wheat, and raise enough other crops for my own consumption, and that of the farm's, then I might like farming. But the man who makes his living from 160 acres of land by cultivating it as a farm, of necessity lives a hard life. It is hard for the farmer, for he must make his profits by his own labor, and be up early and late, leaving no broken rails in his fence for unruly cattle. and whatever is on hand at the end of the year, in the shape of a surplus from receipts over expenses, will be found to have accrued by SAVING—literal self-denial. It is hard for the wife—she too must labor, and she will see her delicious butter and savory cream gulped down by unappreciative farm laborers, and sigh for the poetry of life which was so visible in the distance before SHE tried farming. Don't think of it! The life of the mechanic—the clerk, or the day-laboring man is above and preferable to it. I speak from what I have seen and known. Here in our country town I have seen it tried by dozens who have been brought up and educated to other means of a living, but in no instance can I point to a contented successful farmer who was not educated from his boyhood to that most slavish of all lives, and who toil "from early dawn to dewy eve," and makes labor his pleasure and sleep his only recreation. ——. ——.

CHICAGO, ILL., Jan. 15, 1861.

MESSRS. EDITORS—You will notice from the above that I wrote my friend, asking what advice he could give, tending to the ensuring of my success on a prairie farm in this state, of 160 acres, supposing that I could command about $2,000 as capital to commence on. Divers article in your paper. and others, represent the advantages of farm life and labor, as a general thing, over other pursuits; and with a decided proclivity to farm pursuits I have looked to the contingency of cultivating my acres, (already my own possession,) and enjoying all that a country home offers. I am aware of the toil necessary—and yet I suppose it to be rather a matter of diligence—of watchful attention rather than of exhausting labor; but I was astounded at the aspect thus above set before me. Now, Messrs. Editors, will you be kind enough to give, in your paper, a CRITIQUE of the above, and let me, and others who may be sighing for a farm life, know in plain language what the HOPES of any man with a farm of 160 acres paid for, and $2,000 capital to commence operations, may be, and what the rock upon which he may split. Prairie lands are productive. Here is the grandest wheat region in the world. No forests to hew down, nothing but to enclose and plow, and the application of judgment and diligence.

I would rather pay you or JOHN JOHNSTON $500, cash in hand, for sound practical words of caution, than to rush into a calling tending to subject myself or my family to slavish labor or unhappiness and suffering.

If agriculture is desirable to a man of middle age, of good education, (scientific,) and who has for years labored to post himself in all the theory of farming, who has endeavored to carry on the economy of gardening for some years as the school of the farm—I say, if farming is a desirable occupation I wish to know it beyond a preadventure; and if it is accompanied with great hazards, I wish also to be guarded on that side before I take the step.

I have read your paper for years. I have prepared notes of all valuable hints in your paper, and others, for at least three to four years, and I am thus, with my other reading, prepared to act. Will you now do me the favor to say if I incur more than ordinary hazards in acting according to my desire for a country life. E.

Our friend E. submits a case in which it is somewhat difficult to give advice. We have followed his example, in asking several of *our* farming friends to throw what light they can upon his prospects in undertaking the toils of farm-life; and we think the answers received will not be found wanting either in encouragement or in useful suggestions. We head the list with JOHN JOHNSTON's prompt response:—

Letter from John Johnston, Esq.

NEAR GENEVA, 2nd Feb., 1861.

L. TUCKER & SON—Yours of 30th ult. is received, but I am at a loss how to answer. I can pick out a number of gentleman farmers that would give the same advice as E.'s friend gives him; but they are farmers that choose to keep to the house and give their orders; and if they go out occasionally, they are always careful to keep out of the mud with their thin black boots, and very much afraid of getting hay-seed or dust on their fine coats. Now I never knew these farmers to succeed; neither would a merchant, if he only occasionally went into his store, and trusted to his clerks. I know little about store-keeping—in fact nothing, but I notice that those who attend to their stores daily, early and late, are the only ones who succeed. I never knew a farmer to fail if he was not above his business; and I never knew a mechanic who by his own labor ever made an independency, while I have known many farmers begin with very little, and make themselves rich. True, farmers must know their business, or they cannot expect to succeed any more than I could were I to go to the city of Chicago, and be a merchant or broker.

A man who understands his business, and has 160 acres of good land paid for, and $2,000 in cash, if he cannot make a good living and lay up money, ought to have no sympathy. Had I had E.'s cash capital without the land, 40 years ago, I should have thought myself rich. E. don't pretend to be a farmer *bred*, but I have seldom ever seen a man that had a love or taste for farming that did not succeed—and I have known far more men that had only a small capital or scarcely anything to call capital, make more money by farming than those with a larger capital. One or two cases of this kind may be read with interest:

A London merchant tailor came into this neighborhood something over 30 years ago, and bought a farm of 80 or 90 acres—a hard stiff stubborn soil as there was in this part of the country, and built a pretty good house. The farm, house, and two horses and cows, exhausted his capital. After working some two years at farming he got discouraged, went to a gentleman who was a countryman of his own, *but not a farmer*, and who advised him to consult with me. He came and told me what he had done; he had embarked in farming, but he was afraid it was a poor trade in this country. I told him I thought farming was a bad trade in every country to those who did not understand it, and asked him how he thought I would succeed if I was to go to London and undertake making clothes for gentlemen; he said I would never do at all. I told him that I might, if I liked the trade and could make a living until I learned it; and that if he liked farming and could make out a living until he learned it, as he would a trade, he might do very well—if he did not like farming, I would advise him to sell his farm, and I had no doubt but he could sell it at more than it cost him. He said nothing would please him so well as farming, and after some advice from me he went away in better spirits, worked hard for a few years, made money, raised a respectable family, and is now retired from farming, having accidentally got hurt, and lives comfortably on his money.

It takes a long time to make a fortune or an independency on a small farm; a large grazing farm, to those who understand the management of stock, is a sure way of making money. But then it takes a fortune to buy a large farm here; this, however, is not so in Illinois.

I should like also to tell you of a farmer friend of mine in Ohio, who has farmed there, I should judge, nearly 20 years; he is by no means a working farmer—I don't think he ever plowed, hoed, reaped or harrowed a day in his life, yet he makes a great deal of money by farming. He has, I believe, 400 acres of land—a considerable portion of it prairie; he always lets a considerable portion on shares to plant with corn; keeps one pair of horses, two men from 1st of April till November, one through the winter, and this year he feels pretty sure that he has raised 3,000 bushels of grain with his one team and his two men. True his winter wheat was sown in 1859, but then he has sown as much last autumn. He keeps over 300 sheep, but he don't feed them as well as I would do. He says corn is money right away, but you have to wait for it when you feed it to sheep or cattle. Now this man lays by money yearly, and is independent as to money matters, and I don't think he had any capital but his land to start with. This is one instance where a farmer has made money that is afraid to take off the polish from his boots or soil his clothes with labor. I believe he generally sows his own grain, but I don't think he ever washed or sheared a sheep—in fact he lives at ease, and always has done so, perhaps in a greater degree than the gentleman with his mills and his hired men, finding teams, raising flax seed, &c., who gives advice to E. in the above correspondence.

I have not the least doubt but if many men had had the 400 acres I have mentioned they would have made a great deal more money than my friend, but he has made a good deal—*enough*—and lived comfortably and pleasantly, without hard work. Now I can see no reason why your friend E. should not go and do likewise. The gentleman I mention promises, as soon as his corn is threshed, to let me know how much grain he raised on the farm with his own team the last year. I was once on the farm, and the cultivation did not appear any more thorough than his neighbors, and he has neighbors who have, I suppose, made more money than he has, but, as I have said, he has always taken things very easily. I understand he has at last commenced tile draining, and I should have thought him about the last man to put money under ground, unless it had been the hard cash, so that he might keep it safe. He has always taken good care of the cash, although by no means penurious. I could point out many farmers who have done as well, or better; then again I could pick out *more that have done far worse*—a fact which they attribute all to *bad luck*. It provokes me to hear farmers say, if your stock was in my yards they would never do so well, and tell how much they feed, and never get pay for it. With such men there is always a screw loose somewhere, and every man knows if only one wheel is loose in a watch, it is no better than a potato in his pocket, as far as telling the hour is concerned. It is impossible for me to tell *where the wrong is*, unless I were watching them daily; but I know, as far as stock is concerned, it is not often that I have men that I can trust to feed in winter without closely watching them, and *this is one of the main points in farming*.

JOHN JOHNSTON.

Inquiries and Answers.

FARM WINDMILLS.—I own a farm, situated five miles from where I live, containing 320 acres of excellent land, on which there is no lasting stock water. Last fall I dug a well twelve feet deep, and procured abundance of water. I went eight feet through the yellow clay, then came to a bed of gravel and sand which was four feet deep. The water raised three feet in the well, and stood at that through the entire dry season. I am satisfied that the well would afford water sufficient to run a stream an inch in diameter during the whole dry season, and never reduce the depth below three feet. I had a pump put in the well, and hired a man to pump water for my stock, but it required a great deal of time to do it. Now what I wish to know is, whether you or any of your worthy subscribers or correspondents know of any kind of machinery which could be used to bring up the water, without being at the constant expense of hiring some one to pump it? And if so, where can it be had, and what would be the cost of it? Is there anything better than a good pump with a windmill attached to it; and if not, what would a windmill of suitable size for a well twelve feet deep cost? Whose patent is the best, and where could it be had? JOHN R. MILLER. *Park Co., Indiana.* [For a large herd of cattle, a windmill with pump would be most convenient and best. The simplest and cheapest kind are represented on pages 224 and 225 of *Thomas' Farm Implements;* but as these are not self-regulators, it is not safe to make them more than four feet in in diameter, or the centrifugal force in high winds will batter them to pieces. One of that size will do about one-half or one-third the amount of labor done by a man, with a pleasant brisk wind, the amount greatly increasing with the velocity of the wind. We have seen some mills of this kind, which were not kept in use for a long time, being probably made too large. Halliday's windmill has been in operation for years, and has succeeded well. One is now seen from our office window, which has run three years and a half, has regulated itself, and needed no care but oiling the working parts. The fans, six in number, are each some eight or ten feet long; when the wind is brisk it elevates a stream two inches in diameter, to a height of about thirty feet It is used to throw the water from a quarry; it cost about $500, including erection by the manufacturer. The owner says it saves him about $400 a year, which it would be necessary to expend otherwise in pumping out the water—discharging, as it does, when the wind is good, from 500 to 1000 hogsheads in 24 hours. The smallest size of this windmill costs $75, and we would advise our correspondent to procure one. They are made by the Halliday Windmill Company, South Coventry, Ct. On p. 10 current volume of the Co. Gent., a correspondent highly recommends *Elgar's* windmill, but does not state power nor cost.]

COUGH IN CATTLE.—I have an ox ailing since harvest last; he coughs continually and grows poorer, although I feed him well. I wish to know if there is any cure for him. SAMUEL WILSON. *Ill.* [It is hard to say confidently what his disease is without knowing more of his symptoms, or the origin or cause. If tubucular consumption, not much by way of cure can be effected. But whether this or the milder form of chronic cough, the best thing is *good nursing*. Give him good shelter, with pure air, cover him well with a warm blanket, if practicable protecting his legs down to his knees. Give him succulent food, as roots and meshes—best if of ground oats. We question if any medicine would be of much use.]

HYBRIDIZING POTATOES.—In vol. 17, p. 45, CHAS. HUGHES says—"The potatoes I plant are a cross between the Irish Cup and Peach Blow. I hybridized them by planting alternately a Cup and a Peach Blow the first year, and now they are all of a uniform kind." Now, what I wish to know is this: Does he mean to say that the potatoes taken from the ground after such planting, will be a cross between the two kinds planted? or has he left the most important part of the story untold? *I* suppose the *seed* from the ball, after such a mixed planting, would produce a variety partaking of the nature of both parents; but that the potato will hybridize or mix as stated in his article, is new to me, for I have many times planted two kinds in the same hill, and they invariably came out the same two kinds in the fall. If Mr. Hughes' experience is as mine, his article is wanting in explicitness, and would be likely to mislead the inexperienced. G. W. H.

WELLS IN CELLARS.—Wells in cellars should be covered tight in order to prevent their becoming receptacles for vermin of various descriptions that infest most cellars and houses, and thus are liable by falling into them to render the water unfit for domestic uses. If the bottom of a cellar be covered with a cement, as all should be, this should extend over the covering of the well. No other serious evils result from open wells or springs in cellars, but on the other hand, it has been remarked that jack frost is less likely to visit such cellars. The advantages of covering wells closely, whether in or out of cellars, are much greater than those secured by leaving them open. GEORGE.

WELLS IN CELLARS.—W. wants to know—Co Gent. Jan. 24—what the effect would be upon a cellar, to build a house over a well, and also whether it would injure the well. I have a well in my cellar and have had for nine years, and no better water can be found—so say all that have drank of it. It is cool, sweet and clear, and I have discovered no bad effects from it upon the cellar. Vegetables keep well, and there has never appeared to be any unusual dampness. It is an excellent cellar for keeping milk in warm weather. The well is covered with a platform, and this has a trap-door in the center about two feet square, hung with hinges, so that access can be had to the water in summer when needed in the cellar. A lead pipe passes through the platform into the well, and up through the floor above stairs, and the water is raised with a pump. Previous to occupying my present residence, I owned and occupied a house ten years with a well in the cellar—result the same as above. J. L. R. *Jefferson Co., N. Y.*

PROPAGATION BY CUTTINGS.—Why are fruit trees not propagated by cuttings? B. [In the northern and middle States, common fruit trees will not grow from cuttings in the open air—but by inserting them in a stout portion of root they succeed well—constituting what is commonly termed root grafting. Employing artificial heat would cost more than it would come to.]

GREEN CROPS.—I have six acres of old pasture that I wish to improve. It being so far from home, is an objection to hauling manure to accomplish my object. I have thought of sowing on six cwt. of plaster, and the last of June plow it under, and the last of July sow to buckwheat, and when in the blow, plow that under, and the season following plant with corn. If you, or any of your correspondents, can inform me of a better way, I shall be glad to hear it. E. P. W. *Belchertown, Mass.* [We have no doubt this would be an enriching course, with the understanding that all the growth of the grass is turned in at the summer plowing. We would however propose that a part of the land, instead of being sown with buckwheat, be planted with corn in furrows, three bushels to the acre, as commonly done for corn fodder, and that this crop be plowed in in autumn. It will be old enough for turning under if sown early in summer or at the first plowing. Pulverize the sod well, furrow it one way, three feet apart, strew the corn along the furrows from a half-bushel basket, and cover it lengthwise with a common harrow—or if the soil is thin and dry, with a good cultivator, the teeth so set as to throw the soil on the row. Cultivate once or twice, no hoeing will be needed; and then plow under by first prostrating the crop with a harrow, and using a chain to the beam if necessary, in covering it. We have known this to do well. Our correspondent will then please report the result on the corn crop next year, by *measuring*.]

Fattening Swine.—In answer to your Kentucky correspondent, I will say I think that the best way to make pork is to fatten spring pigs, keeping them growing as fast as possible from the first, by which means no feed is wasted in keeping them until they are old enough to fatten. By so doing you can make them weigh from 250 to 300 pounds each when they are 9 or 10 months old, and I think they make a better quality of pork than if kept squealing through our cold winters, and fattened the next autumn. We think that we can produce more pork from the Suffolk, for the feed and time of growing, than any other breed, and that is what the farmer wants—the most pork in the shortest time, and at the least expense. J. L. Johnson.

Tare or Vetch.—Where can I get the seed of the winter Tare or Vetch? How do they stand your winter? I want them for soiling cows and horses in spring. Will they be off in time to sow a crop of turnips. A S. *Morpeth*, *C. W.* [Will some of our readers who have had experience in the matter, answer the above.]

To Remove Old Putty.—I have a quantity of old sash. I would like to extract the glass, so as to be enabled to put the same into new. Do you know of any easy and cheap mode of dissolving the putty? G. H. [Moisten the putty with muriatic acid, and it will soon become soft. Turpentine will loosen it less efficiently, if the putty is not very hard.]

Hedges.—Please inform me the best work extant on hedges and their management. E. F. M. *Amherst*, *Va.* [Dr. Warder's Book on Hedges, published by C. M. Saxton & Co., is the best. There is a good article, amply illustrated, in the Illustrated Annual Register for 1860.]

Broom Corn.—Can you give me, through your paper, some information as to the best method of raising broom corn? What kind of land suits it best—when to plant it, and at what distance; and also how to gather it? Can you give me the address of a manufacturer of machinery for a broom factory. All information on these subjects will be welcome. A. C. *Knoxville*, *Tenn.* [Will some of our readers, familiar with the subject, answer this inquiry?]

Phosphorus.—Will you give a receipt for making phosphorus? Please tell through The Cultivator. A Subscriber. [Phosphorus, the chief economical value of which is in making matches, is manufactured from bones, by a complex process, which it would be difficult or impossible without much experience to perform. Our correspondent will find it described in Kane's Chemistry, under the head of Phosphorus. It is mostly made in London and Paris. In the last named city a hundred tons are manufactured annually. It may be purchased of druggists at a few cents per ounce, probably a thousand times as cheap as our correspondent could make it—unless he wishes to make a trade of its manufacture.]

Size of Tile for Draining.—I am a new hand at farming, and have a farm of 200 acres cleared land, all of which I want to underdrain in time. I have a stream of water running through the farm suitable to drain into, with a stretch of field at a regular rise from the stream to the line fence, a distance of very near a hundred rods. What I want to know is, will inch tile be sufficient to carry off the water that distance. Dunford. [The statement of two additional particulars would have enabled us to answer with more precision, namely, whether there is not any spot, any water from springs or streams, besides what simply falls from the clouds upon the surface; and secondly, what is the slope or fall of the land towards the stream. A fall of one foot in ten will carry off water more than three times as fast as one foot in a hundred. We think one inch pipe tile is too small for all ordinary draining. A half inch displacement at the end would more than half close the bore; the friction in such small pipes is greater and the flow slower, and there is greater danger of obstructions. Two inch pipe costs but little more, and is small enough for draining in general. Where the descent is as much as one foot in ten, a two inch pipe, well laid, and straight, will discharge about 600 or 700 hogsheads of water in 24 hours. A very wet soil contains about 1000 hogsheads per acre. A ditch which drains a strip of land two rods wide must be 80 rods long to drain one acre, and if the slope is one foot in ten it will drain the acre in about a day and a half. Two inch tile would therefore answer well the purpose desired by our correspondent. Smaller tile would be useful, but not so efficient as larger. If the descent is less than we have supposed, two and a half or three inch pipe should be used for the lower part of each drain.]

Time for Pruning Dwarf Pears.—I feel a great interest in the culture of dwarf pear trees, and have been pleased with the directions and illustrations given in the Register for the current year as to pruning. I am, however, at a loss to know what is the proper time or season for this vicinity, when these ought to receive their annual cutting back, in view of making them pyramids. Old Subscriber. *New-York.* [The work is commonly done towards the close of winter, or very early in spring. Where the winters are not severe, and the trees prove perfectly hardy, the work may be done any time after the cessation of growth, and before the approach of the next growing season. As only small shoots are cut off, where trees have been kept in proper shape, the precise time selected is not of great importance, and cannot be very definitely prescribed. These remarks apply to the common annual pruning, and not to the summer pinching.]

Muck as Manure.—When I bought my farm, there was a lake, containing about 60 acres, about one-third of which was on my land. I tried to get my neighbors to join me and drain, but they said it could not be done. The outlet being on my land, I went to ditching, and after spending over $200 I have succeeded; and now you see the benefit I have conferred on my neighbors in draining about 30 acres for one and ten for another, so that they can mow, where two years ago the water stood four to six feet deep. They claim that I have damaged them by taking away their stock water; but I will compost the muck from my ditch, and cart the compost on my fields, to help me pay the damages, if any are awarded. Would it pay to cart clear muck on my fields, the land being sandy and what is called the poorest in the county, and has been cropped about 20 years without manure? The muck is free, so far as I know, from iron, being vegetable matter from the surrounding marshes. D. J. Kershner. *Elkhart Co.*, *Ind.* [It is probable that drawing the muck on the upland would pay well, especially if performed at a season of the year when teams have but little else to do. Give it, say 100 loads or more, per acre. The result will not be so striking as with yard manure, but it will be permanent. If a little lime, or leached or unleached ashes, could be added, they would doubtless prove useful. Some yard manure would be quite a help. A good crop of clover turned in occasionally, in addition to the above, would doubtless soon make fertile land, and bring heavy crops.]

Pork, and Feeding Animals.—What breed of hogs will arrive, in the shortest time, to 250 or 300 lbs., all under the same treatment? (1.) Which is it best, to sell corn at 50 cts. per bushel, or to fat pork at $6 per 100 lbs.? (2.) Will ten bushels of peas put on as much pork as ten bushels of corn? (3.) When feeding peas to hogs, would you soak them or feed them dry on a clean floor? (4.) When feeding potatoes to cows and horses, would you cook them or feed them raw? (5.) J. M. *Morpeth*, *C. W.* [(1.) We would like the experience of our correspondents on this subject. (2.) With good, easily grown, and easily fattened breeds, regularly fed in comfortable apartments, on ground food, it will be most economical to convert the corn to pork, especially when the value of the manure is taken into the account. (3.) Experiments which have been made, although varying 100 per cent., give a slight average preference to corn. (4.) Grind them, if practicable—but if it cannot be done, soak them. (5.) It does not pay, to cook for horses and cattle.]

Hickok's Straw-Cutter —What power does Hickok's cutter require to work it, and how much stalks will it cut in an hour? What is its price? J. M. *Morpeth*, *C. W.* [Two strong men will work it, but a small horse-power is more efficient. A two horse-power does well, although one horse would probably do all that the ordinary capacity of the machine would bear. It will cut some two or three bushels per minute. The price is about $35.]

Colts Whisking their Tails.—In answer to W. J. O. in your columns, for information in regard to breaking a colt from the habit of whisking her tail, I should say take as little notice of it as possible; it may be done for spite, and if so, the less notice that is taken of it the better; but if done when she is spoken to, take some one along and continue in conversation, and she will quit it, or I am mistaken. I have been induced to offer this, thinking probably it may be of some advantage, having tried it successfully in two instances, and bad cases. A Young Farmer. *New-Jersey.*

Profits of Tobacco and Wheat Culture.

Eds. Country Gentleman—In reply to some inquiries of yours last fall, about raising tobacco, I told you I thought it might be justified by the great crop of grain and grass, which, without any subsequent manuring, would follow for several years.

Below I send you a statement of two crops, raised on the farm of a friend of mine, Mr. **Elihu Belden** of Whately. The crop of tobacco was grown in 1859, and followed by wheat in 1860.

The soil is alluvial—part of a beautiful farm lying on the Connecticut, though not flowed.

The field contained twelve acres. In the spring of 1859, he plowed in 180 loads green barn-yard manure, nine inches deep, and sowed broadcast 8,400 lbs. of Peruvian guano, and harrowed thoroughly both ways. He afterwards, at the time of setting the tobacco plants, used 2,400 lbs. of superphosphate of lime, applied in the hills.

The crop was hoed three times, "wormed," and "suckered." The product was 23,850 lbs. of tobacco.

Expenses.	
Interest on land at $100 per acre,	$72.00
180 loads manure at $1.50,	270.00
8,400 lbs. guano at 3 cts.,	252.00
2,400 lbs. superphosphate at 2½c.,	60.00
Entire labor on 12 acres, of preparing land, setting, cultivating, and harvesting,	660.00
Total,	$1,314.00

Returns.	
20.250 lbs. prime leaf, at 12½c.,	$2,531.25
3,600 lbs. "fillers," at 4c,	144.00
	$2,675.25
Cost,	1,314.00
Net profit,	$1,361.25

to be carried to next crop.

After harvesting the tobacco, he plowed the land nine inches deep, and sowed it, Sept. 16, 1859, with 18 bushels of Kentucky white bald wheat. The wheat was harvested July 26, 27, and 28, 1860, with one of Kirby's American Harvesters, and on threshing, yielded 540 bushels of wheat and 36 tons of straw.

The wheat was of an admirable quality. It lodged badly. Some three or four acres, which stood well, being harvested separately, were found to yield 60 bushels to the acre.

Expenses.	
18 bushels seed wheat,	$32.40
Labor of plowing, sowing and harvesting,	74.00
	$106.40

Returns.	
540 bush. wheat, at $1.62,	$874.80
36 tons straw at $5.00,	180.00
	$1054.80
Cost,	106.40
Net profit,	$948.40
To which add the profit on the tobacco the previous year,	1,361.25
Net profit on two years,	$2,309.65

This is a fair statement, and not exaggerated, for you see the land, which is now stocked down with timothy, will, for three years, bear enormous crops of hay, on the strength of the unexpended manure.

That yield of wheat will hardly be exceeded by your boasted New-York wheatfields, or those of the lime-watery —ague-shaker—miasmatic States west of you.

Greenfield, Mass., Feb. 1861. JAMES S. GRENNELL.

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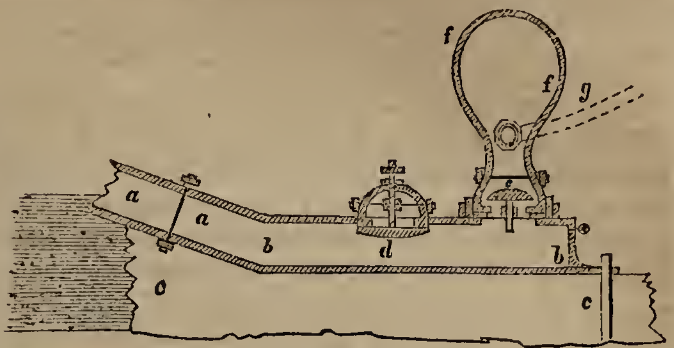
[For the Country Gentleman and Cultivator.]

HYDRAULIC RAM.

The hydraulic, or water ram, as it is sometimes called, is an exceedingly useful machine for elevating water to a considerable height. It is simple in construction and not liable to get out of order, and will work incessantly for years without getting out of repair. It requires but a small stream of water with but a few feet of fall to set one in successful operation, the continuance of which depends upon the momentum of the falling stream, which, being confined in a pipe or cistern, is led to a chamber in which valves are placed and act as follows—says Burn:

The supply pipe, *a.a*, leads the running brook or stream to the chamber *b.b*, bolted to the bed plate *c.c*. A valve *d.*, is connected to the chamber *b.b.*, which has a tendency to fall, so as to keep the water-way open till the stream flowing through the pipe *a.a.* acquires sufficient momentum to close it. The velocity of the stream being thus checked, the water raises the valve *e*, which moves the reverse way of the valve *d.*, and enters the air vessel *f.f.*, from which it passes off through pipe *g.*, which may empty where desired. Water entering the air chamber *f.f.*, is pressed upon by the air in the upper part of the vessel, which closes the valve *e.* connecting with the chamber *b.b.* The momentum of the running stream in the pipe *a.a.* and chamber *b.b.* being thus exhausted, the valve *d.* falls and occasions the escape of the water from the chamber *b.b.* through the opening valve *e.* till the flowing stream again acquires such momentum as to close the valve *d.d.* When this happens the valve *e.* is again opened, and a second quantity of water is discharged into the air vessel *f.f.* Thus perpetually is this pulsation of regular beating, accompanied by a clicking sound as the valves *e.* and *d.* alternately rise and fall. The valves may be made to close from 40 to a 100 times a minute, according to the range of motion allowed them, and the pressure of the water.



The power expended in operating one of these machines is the product of the quantity of water used, multiplied by the height through which it falls before it acts upon the machine. The useful effect produced is the product of the quantity of water raised, multiplied by the height to which it is elevated. In some experiments carefully made for this purpose, "the expense was found," said Prof. Loomis, to be to the useful effect as 100 to 64; *i. e.*, *the machine employed usefully nearly two-thirds of its force.*"

Wherever there is a copious spring not more than fifty feet below the house or barn, the water may be delivered where desired, says Prof. Loomis. A well of moderate depth from which the water can be drawn by a siphon may be made to answer the purpose of a spring. Fine jets for ornamental purposes can be cheaply obtained in this way. The ram may be used also for raising water to an elevated cistern, from which it may be made to drive a small turbine, a water motor, of sufficient power to churn, saw wood, turn a grindstone, cut fodder and turnips, and do other light work.

Having written thus far, the writer met a farmer that has used a hydraulic ram about seven years, and he likes it well. It cost him $15. The ram is about fifty rods from the spot where the water is delivered, at an elevation of 35 feet. He has about 8 feet head, and has two rams now, both forcing water through the same pipe; and they have together delivered into the cistern 100 barrels of water in 16 hours. Two feet head of water will work a ram, but more is better. It, with the pipes, must be placed below the frost to insure success. The accompanying cut differs in construction slightly from those manufactured by by W. & B. Douglas of Middletown, Ct., and Cowan & Co., Seneca Falls, N. Y. The principle, however, is the same in all. They may be bought from $5 to $15 apiece, according to size.

The great convenience of having running water at the house and barn should prompt all to secure it, if it can be done without incurring too heavy expense; and where the spring or brook is below the buildings, as is not unfrequently the case, the ram may be used, provided 2 feet fall or more can be secured. Experience and observation both confirm what is claimed for the hydraulic ram, for thus forcing up water where needed for use. The cost can be no objection. George.

[For the Country Gentleman and Cultivator.]

Importance and Profit of Good Feeding..

Messrs. Tuckers—On the 1st day of last month, my neighbor, Mr. Swan, sold ten two-year-old cattle at a little over sixty dollars each. None of them were older than two years last March, and four of them were two years old from last June until September. Nine of them he raised on his farm, and one was bought when four months old. They were only ordinarily well kept when fed milk. It is very difficult to get hired people to attend properly to feeding calves. Either too little or too much feed is injurious. The first winter they had each daily one quart of oil cake meal and good hay. Then good pasture in summer. The next winter they had two quarts each only, of corn meal ground fine, cob and all. (If not ground fine I think the cob injurious.) On the 6th of last May, these and thirteen others, were turned to pasture on a thirty-five acre field, and on the first of June or a few days after, 69 sheep were put on the same field. Some cattle were taken out and others put in in their place; and the thirty-five acres pastured that stock, and made the whole fat, until the last day of Nov. When yarded, the ten cattle were fed six quarts each daily, of fine ground corn and cob meal, until sold on 1st of Jan. I have known Mr. S. to have his two-year-olds more than 100 lbs. each heavier, but never any so fat—four of them coming so late as from the end of June to the 15th Sept., brought down the average weight.

The object of my writing this is to say something about that thirty-five acre field in which they were pastured. I have known it for nearly 40 years, and until Mr. Swan became the owner, it was the least productive field I ever saw in this part of the country. It would neither bring a remunerating crop of grass or grain. I often told the gentleman who owned it 40 years ago, that he ought to manure it, and try to make it produce paying crops, but he thought it would cost too much, and he had plenty of rich land. The next owners did manure a part of it, but still the crops were miserable. When Mr. Swan bought the farm, I advised him not to plow it, but manure it highly and plaster it, and try to make it produce grass. This he did, and he immediately got first rate pasture. After he drained it, he plowed it after another thorough manuring. Still, on a considerable part of it the grain crops were not remunerating; but I never saw land in this country that will grow grass, or grass that feeds any animals that are put on it, better. I am sure that at least one ton of hay could have been made from every acre on the 1st of July after keeping the 23 head of cattle and the 69 sheep, and it would have pastured sheep fairly until the 7th of this month, (Feb.) when we had the thermometer 12 below zero. We have had no snow in this neighborhood to prevent sheep pasturing where the pastures are good, all this winter; but the intense frost on the 7th and 8th inst., without snow to protect the wheat plants, I am afraid will make next harvest a failure; but it is only a small tract around here that had not a covering of snow.

Now farmers can make their own calculations whether it is better to feed cattle as Mr. S. fed his, and sell them for $60 each and upwards, or feed them in the common starvation way, and have them worth from $15 to $20. I know that if these cattle had been properly attended to the first four months, they would have been worth more money. I have known him to sell his cattle at the same age for considerable more money, but beef was then higher, and I presume there was four of them younger this year. I believe it to be a duty every farmer owes his country, to make his land produce all he possibly can, either in grain or stock, and I have never yet seen a farmer who thought he had raised too much after he had marketed his products. John Johnston.

Geneva, 12th Feb., 1861.

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A vacant mind is open to all suggestions, as the hollow mountain returns a response to all sounds.

MAPLE SUGAR.

Can you or some of your correspondents tell me what is the best Maple Sugar Evaporator now in use—what its cost, and where it can be bought? Would a box made of plank, with a sheet-iron bottom, be better than a large kettle to boil sap in? What is the best to tap trees with, a gauge or an auger? Please give plain directions to make sugar from maple sap. J. T.

Lake Ridge, Tompkins Co., N. Y.

The chief requisite for success in the manufacture of maple sugar, is that all the vessels be perfectly clean and sweet, and that strict cleanliness be observed throughout the whole process. If well conducted, 100 trees will make about 2 to 300 lbs. of sugar, although sometimes less in unfavorable seasons. Whatever tool is used for tapping, let it be such as to make a small wound in the tree; if a gouge, let it be small; if an auger, of moderate size. Much mutilation of the tree should be carefully avoided. Scald all the vessels and wash them thoroughly; never allow the sap to stand longer than 24 hours; if quite fresh, the sugar will be better. Shallow sheet-iron pans are better than deep cast-iron boilers; they can be kept cleaner; they evaporate more rapidly; and less fuel is consumed. The fire space beneath them should be quite flat, so that a thin sheet of flame may extend over the bottom of the pan; and the flue should be high enough to cause a good draught, and carry the smoke far away. Pans made of Russia iron, turned up at the side five or six inches, are good; such a boiler four feet wide and eight long will do much service. We know of none kept for sale. Plank sides to the pan will do, if the sheet-iron is bent up around the outside and nailed on so as to make it water-tight. The brick "arch" or fire-place should be a little smaller than the pan, to prevent burning the sides. We should prefer the pan made wholly of sheet-iron. In either case, the sugar will be burned or injured, if the fire reaches the side of the pan. The sap must be boiled to about one-twentieth or one-thirtieth, to make good syrup. The syrup is then strained through flannel, and placed aside to cool and settle 12 to 24 hours. Then it is placed in the pan again, and a beaten egg and a gill of milk are added to each gallon and stirred, to clarify it, keeping it carefully from boiling till all the scum has risen and is skimmed off. Then boil carefully till it will harden, which may be known by dropping a little into cold water. The liquid sugar may now be poured into proper vessels, and afterwards the cakes placed in a box to drain; or it may be poured at once into hopper-shaped wooden boxes, with a cork in the bottom, which is pulled out when it hardens, and the molasses allowed to drain out. To make the sugar perfectly white, lay a few thicknesses of flannel on the sugar while draining, wet and washed daily with cold water. It will absorb and wash out all the impure coloring matter.

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Hungarian Grass Injurious to Horses.

It so happened last season that the crop of meadow hay was very light, and even prairie grass was very scarce, while the crop of Hungarian was unusually good. Consequently many have fed no hay but this latter. This winter there has appeared a disease among horses hitherto unknown here. They very suddenly lose entirely the use of the hind quarters, and cannot stand at all. Four of my immediate neighbors have each had a horse attacked thus; two of them are to-day dead or dying, and one, after being raised by a tackle and slung for a while, is likely to recover. It is a significant fact, that in each of these cases Hungarian hay has been fed exclusively, and it is confidently believed to be the cause of the disease. I hear of many other cases near here, besides these four, but always where Hungarian has been largely fed. My horses have had nothing but *straw and corn* this winter, and are looking and feeling finely. I would prefer *oats* to *corn*, however. N. N. N.

THE CULTIVATOR.

ALBNAY N. Y., MARCH, 1861.

☞ It will be noticed from the Proceedings at the Annual Meeting of our State Agricultural Society, to a full report of which we give this week a considerable portion of our space, that the Hon. GEO. GEDDES of Syracuse has been chosen President for the coming year. With regard to the financial condition of the Society, the receipts at the Elmira Fair, although smaller than has often been the case, were sufficient to cover the Premiums there awarded and the immediate expenses incurred, while for other expenses the Society have been compelled to draw upon the balance left over last year—amount now in the Treasury, $1,792.71.

With regard to the holding of the next Exhibibition, there was an application from WATERTOWN presented and strongly pressed upon the Committee upon Nominations, and on the reception of their report in the general meeting, and the reference of the subject of Location to the Executive Board, a second application was presented by Mr. FAXON, on behalf of the citizens of UTICA. When the new Board met on Friday morning, it was voted to postpone the subject until its next session, (to take place in the city of Syracuse, March 21,) in order that an opportunity may be afforded in the interim for the presentation of other applications. The Society's requirements may be ascertained from the Secretary, who will furnish this or any other requisite information to those desiring it.

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RECORD OF THE PROGRESSIVE GARDENER'S SOCIETY OF PHILADELPHIA.—This Society was organized about a year since, its object being to promote the steady and intelligent progress of gardening, and the improvement, mental and physical, of gardeners. This "Record," an octavo pamphlet of 130 pages, embraces the doings of the Society for the past year, and includes, among other matters, twelve Essays, read at its monthly meetings, by R. R. Scott, C. H. Miller, Walter Elder, John Landers, Mark Hill, Prof. Stephens, Wm. Grassie, and James Eadie, on subjects of great practical importance. It is a valuable contribuion to our rural literature, and can be procured by enclosing 31 cents in stamps to R. R. SCOTT, 236 Chestnut-st., Philadelphia, Pa.

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OATS ON A WHEAT HEAD!—Wilson Rogers, Erie Co., N. Y., writes that last fall he found a wheat head on which were growing three distinct kernels of oats. He inquires if this be something new. Yes, the most surprising novelty in vegetation we have heard. If the specimen be preserved, please forward it—if not, pardon us for thinking there was some mistake, though our informant did "see it with his own eyes."

So says the American Agriculturist. We do not at all wonder at the statement, for some men have powerful imaginations, easily fancying the shrivelled, and perhaps slightly elongated chaff of wheat, to be oats. We were once shown a *petrified bear*,—and were told beforehand that "every part was *perfect*,"—eyes, paws, &c. On seeing it, we perceived at once that it was one of those many *concretions* of various fantastic forms, found in the rocks of Western New-York, and a good deal of fancy could detect little indentations for eyes, and little knobs the ends of very fat paws, projecting slightly from a very fat young bear. We have however seen pudding bags which had nearly as great a resemblance. We have no doubt that the round septaria, found in the Hamilton shales would be at once recognized as petrified alligator's eggs,—the resemblance being much nearer. If the editor of the Agriculturist gets the head in question, we will give him fifty dollars for it, if oats and wheat are both perfect, and there proves to be no trick about it.

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☞ Mr. BECK, the celebrated Florist, of Isleworth, England, died suddenly on the 15th of Jan., 1861, aged 57 years.

☞ One object, we believe, with the energetic managers of the Hampden (Mass.) Agricultural Society, in the purchase of their fine grounds at Springfield, was the establishment upon them of a MARKET FAIR—an object as yet never carried out to our knowledge, but now promising to be soon tried. The Republican states that the Society "have resolved to hold a Market Fair each spring and fall, for the display, sale and exchange of produce and stock, either in bulk or by sample"—the first in the series to take place at "Hampden Park" the second Tuesday in April.

"A book for the entry of stock and produce will be opened thirty days before the exhibition, at some convenient place, and every pains taken to make it profitable and pleasant to buyers and sellers. Neighboring societies will be invited to participate in the Fair, although its special object will be the advantage of the farmers in the county. Springfield, from its central location and easy accessibility, affords the best facilities for such a project, and all that is needed will be the cooperation of producers. Let every man, who is willing to sell, come forward with his samples on the 9th of April, and plant himself on Hampden Park."

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☞ Messrs. CHARLES & VAN METER of the Albany Centre Market, have purchased of Messrs. Phillips & Wood, ten head of cattle weighing about 10 tons live-weight—among them a pair of four-year old Durham steers said to weigh forty-five hundred, fed by Mr. WADSWORTH on Genesee Flats, which are very superior indeed. The balance are grade oxen, all fed in the same county. The whole will be on exhibition at their stalls in Centre Market, on Friday, next the 22d inst., and Messrs. C. & V. M. extend a cordial invitation to citizens and strangers to call and examine them.

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FINE SHEEP.—In our Grazier Department this week, will be found a communication from JURIAN WINNE of this county, one of the most careful sheep feeders in the country. We were at Mr. Winne's a few weeks since, where we found 318 sheep in his yards, consisting of Leicesters and cross-bred Leicesters, feeding for market. They were a beautiful lot, and nearly ready for the butcher. He gave us the weight of seven three-year olds as follows: 292—289—288—240—230—224—219—being an average of 254½ lbs. each. Beside these, Mr. Winne has a choice breeding flock of Leicesters, bred mainly from the importations of Mr. SNELL of Canada West, (whose splendid sheep attracted so much attention at the State Fair at Albany,) and Mr. BRODIE of Jefferson Co. Among a lot of nice lambs, we examined one, which at 9½ months old, weighed 187½ lbs.

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AG. COLLEGE AT SPRINGFIELD, MASS.—Efforts are making to establish an Agricultural College at Springfield, for which it is proposed to raise $100,000—$25,000 to be raised in that place—$25,000 in other parts of the State, and $50,000 from the State treasury. We hope they will succeed, and we have strong confidence in their success, for when our friends at Springfield take hold of any enterprise they are not apt to fail.

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☞ Crosby, Nichols, Lee & Company, Boston, have published "THE PRINCIPLES OF BREEDING: or, Glimpses at the Physiological Laws involved in the Reproduction and Improvement of Domestic Animals. By S. L. GOODALE, Secretary of the Maine Board of Agriculture."

We are indebted to the Author's attention for an early copy, which we have not as yet been able to examine minutely, but judging from the chapters we have read, the work presents in convenient form much information heretofore less accessible to the majority of readers than its importance deserved. Judicious in the selection and careful in the interpretation of his authorities, Mr. Goodale's views are well and concisely expressed; his quotations and conclusions are apparently impartial, and the wide circulation of his treatise would—as its preface remarks—serve "to awaken greater interest upon a matter of vital importance to the agricultural interests of the country." It forms a volume of 164 pages.

Bone Dust for Buckwheat.—Last summer I sowed on two acres, a dry gravelly knoll, where I have never got any crop of any amount, four bushels of bone and one bushel of plaster, with buchwheat, and got thirty bushels of buckwheat more than I ever got from the land in fifty years. It is the first of my using artificial manures. I should be satisfied with barnyard manure if I could get enough; but I cannot, and must try artificial manures, and should like to get more information in regard to bone dust, superphosphates, poudrette, &c. G. S. M. *Woodbury, Ct.* [We shall be pleased to hear from any of our readers, the results of any trials they may have made with artificial manures.—Eds.]

The Country Gentleman.—I cannot forbear writing to you to express my great gratification with, and deep indebtedness to, your excellent Country Gentleman. To me it is invaluable. I hardly know what amount of money could induce me to do without it. Being a young farmer, I have always found much in it to cheer me under the discouragements incident to the inexperienced tiller of the soil—much to lead the mind from the grosser part of agriculture, viz., physical labor, to studying nature and nature's laws, and to bring all the appliances of art, and all the discoveries of science to lighten labor, improve the soil, and consequently to raise the comparative social position of the farmer, equal to or superior to that of the most favored class of the community. I have long thought the Co. Gent. far superior to any agricultural paper in the United States. S. N.

Meat for New-York.—The New-York Times, to whose excellent reports of the New-York Cattle Market, we are indebted mainly for our weekly reports, furnishes tables showing the weekly arrivals of cattle, sheep, &c., for market, in that city, during the year 1860. From these tables we gather the following facts: The average weekly arrivals were—beef cattle, 4,330—milch cows, 138—veal calves, 772—sheep, 9,888—swine, 6,147—making the entire number for the year as follows: beef cattle, 226,747—milch cows, 7,154—calves, 40,162—sheep, 514,191—swine, 319,628, and a grand total of animals of all kinds for the year, of 1,107,882—weekly average of all kinds, 21,395.

The following table shows from whence a portion—as complete as the records will allow—of the beef cattle came:

Illinois,	63,585	Canada,	2,011
Ohio,	35,974	Virginia,	1,069
New-York,	28,449	New-Jersey,	574
Kentucky,	13,137	Connecticut,	536
Indiana,	12,835	Wisconsin,	146
Iowa,	12,174	Texas,	99
Missouri,	7,464	Cherokee Nation,	64
Michigan,	3,260	Massachusetts,	38
Pennsylvania,	2,726		
		Total,	184,081

Sorghum Sugar.—Enclosed you will find a specimen of the state premium home-made sugar, from the Imphee, made by J. Grout, Lancaster, Keokuk Co., Iowa. The same party also made the best syrup on exhibition. Improvement in syrup this year over last, at least 25 per cent on the average. W. D. W. [This sugar is of a much better quality than any we have ever before seen made from the Sorghum. If our prairie friends can produce such sugar as this at a reasonable price, they may be sure of a ready market for all they can make.]

Farming in Canada West.—A Subscriber at Simcoe, writes us that he is wintering 322 head of sheep, over 200 of them breeding ewes—70 pure bred Leicester ewes—18 Southdown, and 135 Spanish Merinos. He is also wintering 40 head of Durham grade cattle, and 16 head of horses. He says—"I have comfortable shelters for all my stock, and keep them all in good condition. I find this the only way to make stock pay. When I have leisure I will give you my system of managing my 600 acre farm." We hope this promise will not be forgotten.

The Right Spirit.—I am a young farmer just commencing for myself, though I have been raised at the business, and have always had access to the best of agricultural works, yet I am ever striving for a better mode of farming, and more information. I know no other way than to fill my table with the best Agricultural Journals of our country, so I have concluded to send you $2, and add the Country Gentleman to my list. I hope to have, in a few years, one of the best conducted farms in our state. Any satisfactory experiments I may make, I shall send you as I have other papers. J. H. H. *Hamilton Co., O.*

A Present of Poultry.—*Victory, N. Y., Feb.* 4.—Messrs. L. Tucker & Son: *Dear Sirs*—With this please find a trio of young Rouen Ducks. They weigh only fifteen pounds. I could have sent you a trio of old ones that would have weighed twenty-four pounds, but perfer to keep the older ones for stock. I have derived great satisfaction and some profit by reading your excellent paper, and take this way to let you know that your labors to advance agriculture are appreciated. D. L. Halsey. [The ducks, after Exhibition at the Agricultural Rooms during the present week, will be disposed of all the more agreeably, from the complimentary manner in which the present is tendered, and from the recollection of similar attentions received from the same source on several former occasions.]

Straw for Horses and other Stock.—A correspondent of the Country Gentleman, in a recent private letter, says—"I consider J. L. R. all wrong on the straw question. My five horses have eat no hay this winter, and I have for years fed them principally on straw instead of hay, which I should not do, if not best and cheapest, as I sell a large quantity of hay every year. My cows are being wintered on nothing but straw, chaff and turnips, and have never had calves look so well at this season, though fed hay, meal and shorts—all the good things they could be induced to eat."

St. Lawrence Ag. Ag. Society.—The Annual Meeting of this flourishing Society was held at the court house on the 2d Tuesday of January, 1861. The attendance was full and harmonious, but spirited discussions of the various topics introduced, showed that the interest in the Society had no abatement, and altogether it was one of the most pleasant and encouraging meetings the Society ever held. We learn from the Secretary, L. E. B. Winslow, Esq., that the receipts of the Society during the past year were over $4,200, and it owns its first purchase of lands free and clear of all incumbrance. The following is the Board of Officers elect for 1861:—

President—Calvin T. Hulburd, Brasher Falls.

Vice-Presidents—Reuben Nott, Ogdensburgh; Nelson Doolittle, Russel; Joseph Whitney, Madrid; Alexander J. Dyke, Depeyster; George A. Sheldon, Hermon; Charles N. Conkey, Canton; Joseph E. Orvis, Massena; Joseph E. Durphy, Hopkinton; A. Lindsay, D. F. Berry, Mason Spencer, Malone, Franklin Co.; Allen Hinman, Constable, Franklin Co.; George V. Hoyle, Phinney Moore, Timothy Hoyle, Champlain, Clinton Co.; John Sanborn, Plattsburgh, Clinton County.

General Superintendent—Bingham E. Sykes, Canton, St. Lawrence county.

Treasurer—George C. Bogue, Canton.

Secretary—L. E. B. Winslow, Canton.

The Albany Co. Ag. Society, held its annual meeting Jan. 9, when the following were elected officers for ensuing year:

President—William Hurst.

Vice-President—Harmon V. Strong, Watervleit.

Secretary—John Wilson.

Treasurer—Joseph Hilton, New-Scotland.

Directors for Three Years.—Wm. Tuttle, Coeymans, and John Waggoner of Guilderland; for Two Years—John H. Booth of Bethlehem, H. L. Godfrey of Albany.

Joseph Hilton being a Director of the Society, resigned that position, and Wm. Lape of Watervliet was elected to fill the vacancy for the unexpired term.

Confinement of Sheep in Winter.—I read your remarks in the first number of the present vol., under the head of "Care of Sheep in Winter." I like them well. I however differ with you respecting half open sheds. Over thirty years' experience has convinced me that close confinement in warm sheds or barns is better. In localities where there is little or no wind, it is not so essential. In this section of Vermont we have frequent rains in winter, and sheep are sure to stand out in the rain if not prevented by being confined. I wish I could prevail on you to visit this part of Vermont. I believe, by a personal inspection, you will be convinced that close confinement will not injure the health of sheep. JOHN S. PETTIBONE.

Manchester, Vt.

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☞ The table of Exports and Imports at the Port of New-York, for January, has just appeared. We copy the figures for Breadstuffs and Provisions exported during the month, as compared with January, 1860, as a sample of the increased business the crops of the past season have placed within the reach of our merchants and transporters:

	1860.	1861.
Flour, bbls.,	63,787	205,511
Corn Meal, bbls.,	7,466	8,507
Wheat, bush.,	76,019	1,161,649
Corn, bush.,	17,863	761,926
Beef, tcs and bbls.,	14,654	8,592
Pork, bbls.,	10,182	7,592
Bacon, 100 lbs.,	30,792	154,122
Lard, 100 lbs.,	13,635	68,736
Cheese, 100 lbs.,	10,135	45,771
Butter, 100 lbs.,	......	14,977

The total value of Exports of Domestic Merchandise from New-York during January, 1861, was $10,277,925, against $5,299,542 in January, 1860—or very nearly *twice as great.* The amount of Specie and Bullion received at New-York from Foreign Ports, during January, 1861, was 7,262,229—against exports during the month of only $58,894, showing over $7,200,000 excess in imports over exports of the precious metals.

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WILSON'S ALBANY STRAWBERRY,
Lawton Blackberry & Allen Raspberry.

JOHN WILSON of the Albany Nursery, Albany, N. Y., will send to any address 500 Wilson's Albany Strawberry, 100 Lawton Blackberry, and 100 Allen's New Raspberry, securely packed, on the receipt of $10. Those desiring 200 Lawtons, instead of 100 Lawton and 100 Allen Raspberry can have them thus packed at the same charge.
March 1—m1tw4t.

AGRICULTURAL IMPLEMENTS.—A large assortment for sale low, to close up consignments.
March 1—m3t. A. LONGETT, 34 Cliff St., New-York.

AGRICULTURAL AND HORTICULTURAL IMPLEMENTS.—A complete assortment of latest approved patterns and best made. Farming Implements, Machines, and Tools, consisting of everything required by the Farmer, Planter, and Gardener.

Also GUANO, BONE DUST, Phosphate, Poudrette, Plaster, &c.
Field, Flower, and Garden SEEDS.

Trees, Plants, and Shrubs, all of reliable quality, and furnished on the most reasonable terms. For sale by R. L. ALLEN,
Feb. 28--weow2tm2t--Apl. 4--w1t. 189 & 191 Water-st., New-York.

OPORTO GRAPE—THE WINE GRAPE OF AMERICA.—The Oporto is an American Seedling, strong grower, perfectly hardy, abundant bearer, and ripens early.

CERTIFICATE FROM M. MACKIE, ESQ., PROPRIETOR OF CLYDE NURSERY.

This may certify that I have cultivated the Oporto Grape, for several years, and find that the vines are entirely free from mildew and blight, that they do not winter kill in the least, and that they are good bearers. I have tasted the wine of several different years, and esteem it very highly. MATHEW MACKIE.

FROM S. CLARK, ESQ.

"For several years we have made wine from the Oporto Grape, and find a ready sale at one dollar per bottle, selling fifty bottles for single orders.

I have therefore great pleasure in recommending the Oporto Grape to every person who wishes to make wine for his own use, or for sale." SYLVESTER CLARK.

For description of Grape and cut see COUNTRY GENTLEMAN, November 15, 1860.

Strong vines, $1. For vines or descriptive circulars address
March 1—weow2t—m1t. E. WARE SYLVESTER, Lyons, N. Y.

STUMP AND ROCK PULLERS.

Hall's Hand Stump Pullers, price, $60.00
Willis' Power Stump Pullers, small size, 150.00
do. do. largest size, 225.00
Lyon's Hand Stump and Rock Pullers, 80.00
Bolles' Power on Wheels for Rocks, 230.00

This machine lifts the rocks and transports them where required. For sale by R. L. ALLEN, 189 & 191 Water-st., New-York.
Feb. 28--weow2tm2t—April 4--w1t.

GARDEN SEEDS.—I have now in store a full assortment of GARDEN, FIELD, and FLOWER SEEDS, among which will be found all the varieties of Beans, Beet, Cabbage, Carrot, (all American growth.)

CORN—Extra Early Dwarf Sweet, Early Burlington, &c., Cucumber, Lettuce, Melons, Onion, Parsnip.

PEAS—Princess, Lord Raglan, Epps' Monarch, Champion of Scotland, Dwarf Green, Marrow, Daniel O'Rourke, Competitor, Champion of England, all fine varieties.

TOMATOES—Fejee Island, very solid and extra fine, and all other varieties.

TURNIP.—American growth and of extra quality, Radish, Asparagus, Spinach, Squash, Salsify, Rhubabr, Rape, Parsley, Artichoke, Broccoli, Cauliflower, Celery, Cress, Corn Salad, Leek, Endive, Kale, Chervil, Collards, or Colewert, Brussels Sprouts, Okra, Nasturtium, Mustard, Egg Plant, Pumpkin, Pepper, Scorzonera, Mushroom, Herbs, &c.

TREE AND SHRUB SEEDS of all kinds.

FRUIT SEEDS.—Apple, Pear, Quince, Apricot, Blackberry, Cherry, Currant, Gooseberry, Peach, Grape, Nectarine, Raspberry, Strawberry, &c.

BIRD SEEDS.—Canary, Hemp, Rape and Millet.

HEDGES—Honey and Yellow Locust, Buckthorn, Osage Orange, &c.

POTATOES—Ash-Leaf Kidney, Early June, Early Dikeman, Peach Blow, Prince Albert, and all other good varieties.

CLOVERS—White Dutch, Lucern, Red Alsike, Scarlet, &c.

GRASSES—Red Top, Timothy, Creeping Bent, Tall Oat, Green Grass, (best for lawns,) Orchard, Ray, Foul Meadow, Kentucky Blue, Sweet Vernal, Hungarian, Saintfoin, Fescue, Foxtail, Fine Mixed Lawn, &c., &c.

SPRING WHEAT—Tea, Black Sea, Golden Drop.

SPRING RYE, SPRING VETCHES, SEED BARLEY.

SEED OATS, Scotch and American, extra heavy and clean.

FRUIT, ORNAMENTAL TREES, SHRUBS, and EVERGREENS, and all kinds of plants furnished to order, carefully packed, from the best nurseries and conservatories in the United States.

I take especial care to see that all my seeds are fresh, and well cleaned, and the very best of the kind, which can be obtained from reliable parties at home and abroad. Orders by mail attended to promptly. SEND FOR A CATALOGUE. R. L. ALLEN,
Feb.28--weow2t--m2t.--Apl4--w1t. 189 & 191 Water-st., New-York.

I. T. GRANT'S PATENT DOUBLE BLAST
FAN MILLS.

They will chaff and screen wheat in passing through the mill once, in the most perfect manner, and all kinds of grain and seed. Warranted the very best in use.

Patent Rights for sale of all the Western States.
Address I. T. GRANT & CO.,
May 1—m12t Junction, Rensselaer Co., N. Y.

LETTERS ON MODERN AGRICULTURE, by Baron Von Liebig—just published, and for sale at this Office. Sent by mail, post-paid, for $1.

R. L. ALLEN'S MANIPULATED GUANO.

This is a mixture of Peruvian and the choicest American Guano. The first contains a large proportion of Ammonia, and the latter a large proportion of soluble Phosphates, both of the highest importance to rapid germination and large crops. The combination of the above elements is just what is required to make a universal fertilizer. Any one can make this mixture for himself. But there are so many qualities of the American, and the Peruvian is so FREQUENTLY ADULTERATED in the hands of small dealers, and there is besides the expense and trouble in mixing in small quantities, that it is deemed an object to make A STANDARD ARTICLE of a PERFECTLY RELIABLE QUALITY, and offer this at a price predicated upon the proportions of each kind of guano used. $45 Cash per ton of 2,000 lbs., in barrels or bags. If for immediate use, it may be packed in bags, containing about 150 lbs. each; if to be kept for some time, the American Guano will rot the bags, and barrels should be used.

R. L. ALLEN,
Feb. 28--weow2tm2t--Apl 4--w1t. 189 & 191 Water-st., New-York.

FINE IMPORTED FLOWER SEEDS.

FOR SALE BY JAMES VICK,

Rochester, N. Y.

I have this day (Feb. 19th) received a fresh invoice of FINE FLOWER AND VEGETABLE SEEDS from Europe, embracing some of the finest varieties ever offered to the lovers of flowers. Many are new and rare. Among them are the following:

STOCKS.—Ten Week—New Largest Flowering, 8 colors separate, or mixed--Emperor, larged flowered. Brompton, (winter)—Sulphur Yellow, new.

ASTERS.--Globe Flowered; Dwarf Pyramidal Bouquet Flowered; Truffaut's Perfected, 18 colors, either separate or mixed; La Superb; New Crown, 4 varieties, separate colors, or mixed; Ranunculus Flowered; Chrysanthemum Flowered, 9 colors, separate or mixed; New Giant Emperor.

BALSAMS.—Rose Flowered. 12 colors, separate or mixed.

LARKSPUR.—Double Dwarf Hyacinth Flowered; Stock Flowered.

HOLLYHOCKS.—From Show Flowers.

MARVEL OF PERU.—Eight varieties.

SWEET PEAS—Seven varieties, separate colors.

PICOTEES—From Choice Flowers.

ANTIRRHINUM.--Flower Alba; Striped; Brilliant; Firefly; Galathe—each color separate or mixed.

CONVOLVULUS MINOR—Tri-Color; Splendens.

CONVOLVULUS MAJOR—Purpurea.

GAILLARDIA—Picta; Josephus; Alba Marginata.

GODETIA—Amoena; Wildenowii.

PHLOX DRUMMONDII.—Scarlet; Leopoldi; Blue, white eye; Alba Oculata, (pure white, purple eye.) All of these separate or mixed.

PORTULACCA—Alba Strata; Caryophyloides, rose, striped with deep carmine.

PANSIES—I quality; II quality; from red flowers; from striped flowers; from light flowers, voilet bordered.

WALL FLOWER—Ten varieties.

SALPIGLOSSIS.—Variabilis, largest flower: Dwarf, fine.

ALSO—Calliopsis; Dianthus Chinensis; Aconitum Lycoctonum; Aquilegia, double; Bartonia Aurea; Campanula; Cobea Scandens, climber; Sweet William, best seed; Petunia, 3 varieties; Zinnia Elegans, many varieties.

Everlasting Flowers.

Helichrysum, several varieties and colors; Acroclinium, Roseum and Alba; Amaranthus, Bi-color and Tri-color; Globe Amaranth, (Gomphrena,) Carnea, Rubra, and Aurea Superba; Polycolymna Stuarti, fine white flower; Rhodante Manglesh, very fine; Xeranthemum, Cœrulea and Compacta.

Ornamental Grasses.

Antoxanthum Gracile; Briza, Minima and Maxima; Lamarkia aurea; Chlorys Radiata, Eragrostis Elegans; Elymus Hystrix; Lagurus Ovatus; Pennisetum Longistilum; Stipa Pennata.

Vegetables.

Early French Short-Horn Carrot; Best Winter Savoy Cabbage; Early Winningstadt Cabbage; German Cucumber, Very Long Green; Early Oval Rose Radish; Early Paris Cauliflower; Lenormand Cauliflower, very large, late; French Dwarf Solid Self-blanching Cauliflower; Lester's Perfected Tomato; Large Red Solid Tomato: Hubbard Squash; Teltow Sweet Turnip.

For the convenience of those who order seeds I will send any of the above, by mail, postage paid, at 10 cents per package, when the order shall amount to 50 cents. When the order amounts to $1, one package extra may be ordered. For $2, three packages extra, and for $5, ten extra packages, all of which will be sent free of postage.

Novelties.

I have seeds of a few Novelties well worthy of attention.

NEW DOUBLE ZINNIA, which is represented in Europe as almost as beautiful as a Dahlia. Ten seeds for 25 cents.

DIANTHUS HEDDEWIGII—Seeds, per package, 25 cents.

DIANTHUS LACINIATUS, 25 cents.

MIMULUS ROSEA PALLIDA, 25 cents.

PODOLEPIS AFFINIS, from Melbourne, finest of the species. 10 seeds for 25 cents.

EUCHARIDIUM GRANDIFLORA ALBUM, per package, 25 cents.

CALLIOPSIS CARDAMINEFOLIA HYBRIDA, 25 cents.

DIANTHUS CHINENSIS NANUS, VAR. ATROSANGUINEUS FLOWERED—brilliant and very hardy, 25 cents.

PHLOX DRUMMONDII RADOWITZI—dark rose, striped with white, 20 cents.

Feb. 28—w&m1t.

NANSEMOND SWEET POTATOES FOR SEED.

—A superior article, $2 a bushel, $5 a barrel, 2¾ bush.—in strong barrels, guarantied to arrive safely.

☞ Purchase directly from the grower. Our Nansemonds have given fine satisfaction for many years. Responsible parties will be supplied with seed to be sprouted on shares. Plants, in their season, of superior quality, and at lowest rates. Send for our new circular of directions in growing and preserving, and experience of growers in different portions of the country.

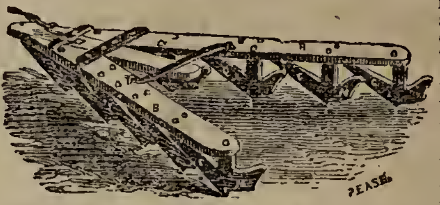
C. B. MURRAY,
(Successor to O. S. Murray & Son.)
Foster's Cressings, Warren Co., Ohio.
Feb. 28—w2teow1t—m1t.

PERUVIAN GUANO—Government brand and weight.

ICHABOE GUANO.
AMERICAN GUANO.
FISH GUANO.
IMPROVED SUPERPHOSPHATE OF LIME.
BONE DUST, FINE AND COARSE.
LAND PLASTER.

For sale in quantities to suit purchasers. A. LONGETT.
March 1—m3t. No. 34 Cliff-st., New-York.

SHARE'S COULTER HARROW.



Now is the time to send in your orders for this most useful implement. As a Cultivator and Harrow it is unequalled, saving much time and labor, as in once going over it leaves the ground in better condition than three times the same amount of labor with the Scotch or Geddes Harrow. It is the best grain and peas coverer in the universe, and will save its cost in one season for this purpose alone. Circulars containing references sent free on application. Price $15.

A good stock of PLOWS, HARROWS, HAY CUTTERS, SEED SOWERS, CULTIVATORS, &c., as also a full supply of GARDEN and FIELD SEEDS, constantly on hand, and orders will receive prompt attention. Address CHAS. E. PEASE,
84 State-st., Albany, N. Y., Manufactory Tivoli Hollow.
Feb. 21—w4tm2t.

LAWTON BLACKBERRIES—

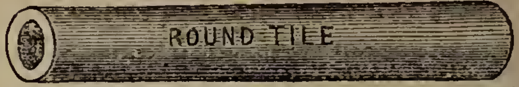
A fine lot from Root Cuttings—$1 per dozen—$4 per 100.
Root Cuttings by mail, post-paid, 25 for $1. H. B. LUM,
Feb. 1—m2t.—Mar.7—w4t. Sandusky, Ohio.

1861. C. & W. McCAMMON'S ALBANY 1861.

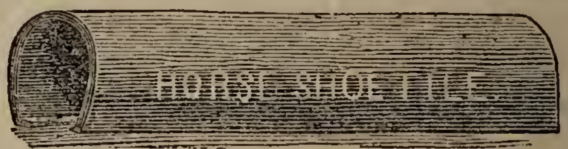
DRAIN TILE WORKS,

CORNER OF CLINTON AVENUE & KNOX-ST.,

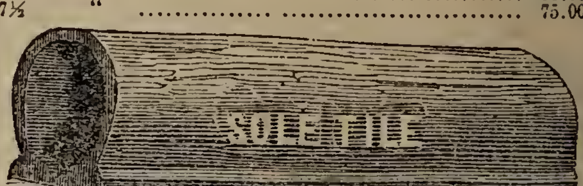
ALBANY, N. Y.



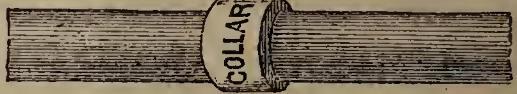
	Per 1000 feet.
1¼ inches round,	$8.00
2¼ "	12.00
3½ "	40.00



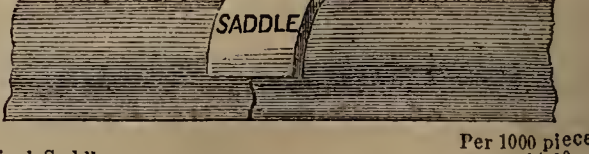
	Per 1000 feet.
2½ inches rise,	$10.00
3½ "	15.00
4½ "	18.00
5½ "	35.00
6½ "	55.00
7½ "	75.00



	Per 1000 feet.
2 inches rise,	$10.00
3 "	16.00
4 "	30.00
5 "	50.00
6 "	80.00
9 "	200.00



	Per 1000 pieces.
1¼ inch Collars,	$4.00
2¼ "	10.00



	Per 1000 pieces.
2 inch Saddles,	$4.00
3 "	6.00
4 "	10.00

☞ ORDERS SOLICITED—TERMS CASH. Address
March 1—m1t. C. & W. McCAMMON, Albany, N. Y.

NEW CUYAHOGA GRAPES.—Send a stamp for our Illustrated and Descriptive Catalogue of over 80 sorts of New Grapes: also Raspberries, Currants, Goosêberries, &c.,—also Roses and Flowering Shrubs.

Feb. 14—w4tm1t. C. P. BISSELL & SALTER, Rochester, N. Y.

"FAMILY NEWSPAPER."

Mrs. Hankins' Mammoth Pictorial is in its Sixth Vol. and has 300,000 readers. Full of Engravings and Fashion Plates. Largest, nicest and best in the world for **75** cts. a year. AGENTS Wanted. Ladies, Teachers, Clergymen or Post-Masters. For Specimens or Terms to Agents, enclose Red Stamp to HANKINS & CO., New-York.

Feb. 21—w1m1t.

THE SHORT HORN BULL "YOUNG SULTAN," will be sold at a very low price if applied for soon. He was calved March 15. 1859, now 23 months old. weighs 1500 lbs.—sure stock getter—color rich roan—perfectly kind and gentle—fine stylish figure. His sire, "Sultan," was bred by Hon. F. M. Rotch of Morris, N. Y., and sold by me to the "Wapping Stock Breeding Company," Massachusetts.

A few pairs beautifully marked LOP-EARED RABBITS for sale.

JOS. JULIAND, 2d, Bainbridge, Chenango Co., N. Y.

Feb. 21—w2tm1t.

TO FARMERS—80,000 Barrels Poudrette of

The Lodi Manufacturing Company,

For sale in lots to suit purchasers, at $2 per bbl. under 7 bbls., or $1.50 per bbl. for 7 bbls. and over. This is the CHEAPEST FERTILIZER in market; $3.00 worth will manure an acre of corn, and will

Increase the crop from one-third to one-half,

and will ripen the crop about two weeks earlier. A pamphlet with satisfactory evidence and full particulars, will be sent gratis to any one sending address to GRIFFING BRO. & CO.,

General Agents for U. States, 60 Cortland Street, N. Y.

Jan. 24—w12t—m3t.

"WOMEN OF NEW-YORK,"

A curious new book by Mrs. Hankins, giving the Portraits of 36 Living Women, as she finds them in actual life, with a spicy and interesting description of their respective peculiarities. The book is a great novelty, and happily suited to both sexes. The Authoress gives us more romance in every day life, than is found in works of fiction. Among the characters are Dashing Widows, Women in Black, Fascinating Ladies, Old Men's Darlings, Adventuresses, Bogus Ladies, Widows' Daughters, Fortune Tellers, and Honest Women of Toil. Such a volume is worth a hundred times its price to a family of girls. Fancy binding, 350 pages, 50 Engravings. Enclose a dollar bill and get a copy post-paid by return of mail. HANKINS & CO., Publishers "Family Newspaper," Office, **132** NASSAU ST., New-York, AGENTS WANTED. For Synopsis of Book, or Terms of Agency, enclose a red stamp. Feb. 21—w1tm1t.

SEEDLING POTATOES FOR SALE.

I. Varieties.—1. Garnet Chili, red. 2. Pink Eye Rusty Coat, white. 3. Cuzco, white. These three sorts are all sound, and ripen with the season. The two first are the hardiest sorts known, and yield nearly alike. Third is a little less hardy, but uniformly and everywhere the largest yielder I have known. 4. New Kidney, white. 5. Copper Mine, copper colored. These two sorts are both a little long and ripen two weeks earlier than Nos. 1, 2, and 3. Though hardy, they are a little less so than Nos. 1 and 2. These five varieties all have white flesh, all grow closely in the hill, do not push out of the soil, and are smooth, except that No. 3 is deep eyed. They yielded in 1859, in common field culture, from 255 to 372 bushels to the acre.

☞ I have no very early sort that is highly reliable.

II. Age and Diffusion.—The Garnet Chili is a seedling of 1853, is now very widely known and prized as a sort adapted to all soils and climates. The others are all Seedlings of 1856, and were first given out in 1860. They too are widely spread, (from Massachusetts to Kansas, and from Missouri to Canada West.) Numerous reports on their culture in 1860, (a season almost everywhere either very wet or very dry,) show a wide adaptation to soil and weather. These reports would indicate (what my home experience justifies) that the Pink Eye Rusty Coat is nearly or quite equal in all respects to the Garnet Chili.

III. Price.—$3 (three dollars) per barrel of 140 lbs., $1.50 per bush., $1 per half bushel, and 50 cents per peck, cash in advance. The larger price is charged for the smaller quanties from the proportionably greater cost of packing and delivery.

IV. Transmission.—They will be forwarded by railroad, canal or express, as shall be directed. The sorts will be kept distinct, and the packages carefully directed. The sorts will be described in a printed sale bill, with directions for potato culture, which will be forwarded by mail when the potatoes are sent.

☞ Sums of less than $1 may be sent in 3 cent postage stamps.

☞ Should any one wish to get small packages of these five sorts, I will put up two tubers of each and forward by Express to those who have previously sent me 30 cents in postage stamps.

☞ In the sales of many years I have had but one package eventually miscarry.

☞ The first of April is as early as potatoes can usually be sent safe from frost, except they go directly south.

CHAUNCEY E. GOODRICH, Utica, N. Y.

References.—The Garnet Chili is too widely diffused and too highly appreciated to need testimonials. The other four sorts are favorably known to the following, among many others who have cultivated them the past year: Albert Bruce, Hubbardton, Vt., Wm. F. Bassett, Ashfield, B. K. Bliss, Springfield, C. H. Gleason, Holden, all of Massachusetts; C. G. Hazzletine, Cherry Valley, Wm. P. Humphrey, New Rochelle, Wm. F. Ridder. Bsutl, S. T. Kelsey & Co., Great Valley, Geo. Arkell, Canojaharie, all of New-York. Thos. T. Mathew, Jenkintown, E. M. McConnell, New Castle, Wm. S. Gray, Half Moon, P. Sutton, Pittston, Aaron Bomburgh, Harrisburgh, and F. W. Noble, all of Pensplvania. Dr. E. P. DeMarcellin, Spottswood, B. F. Robinson, Goodwinville, and Benj. Shepherd, Greenwich, all of New-Jersey. J. C. Holmes, Lansing, Mich., S. L. Manker, Pontiac, and John Moss, Robin's Nest, Ill., J. Howard McHenry, Baltimore, Md., Yardley Taylor, London Co., Va., and Geo. Buckland, Canada West.

Feb. 21—w3tm1t.

OSIER WILLOW CUTTINGS.—The best variety for market and for live fence (Salix purpurea)—price $3 per 1000. By mail, postpaid, for experiment, $1 per 100.

Jan. 17—w16tm4t. D. L. HALSEY, Victory, Cayuga Co., N. Y.

COUNTRY AGENTS WANTED.

$3 A DAY.—Mrs. HANKINS WANTS MALE or Female Agents for her Pictorial "FAMILY NEWSPAPER," also for her Curious new Book of FEMALE CHARACTERS in the City. For Specimens and Terms, enclose Red Stamps to

Feb. 21—w1m1t. HANKINS & CO., New-York.

TRAVELING AGENTS WANTED.—To sell a NEW AND VALUABLE MACHINE, on commission or salary. For terms and instructions address, with stamp,

Feb. 14—w8tm2t. J. W. HARRIS & CO., Boston, Mass.

SHORT-HORNS.

I offer for sale two Duke of Oxford BULL CALVES, one of them got by the "Duke of Gloster," (11382,) the other by imported "Grand Duke of Oxford," (16184.)

Also several well bred Bull and Heifer Calves by the same sire.

I have also a few

JERSEY OR ALDERNEY

Cows and Heifers for sale. JAMES O. SHELDON,

Jan. 24—w&mtf. White Spring Farm, Geneva, N. Y.

THOS. WOOD continues to ship to any part of the Union, his celebrated PREMIUM CHESTER CO. WHITE HOGS, in pairs not akin, at reasonable terms. Address,

Jan. 10—w&m1y. PENNINGTONVILLE, Chester Co., Pa.

STEEL PLOWS.—We are manufacturing for the spring trade large numbers of our Mohawk Valley Clipper Plows with steel mold-board and land-side, with steel or cast point, as desired, and would refer you to the following persons, who have them in use:

John Johnston, Geneva, N. Y.
J. Ingersoll, Ilion, N. Y.
Wm. Summer, Pomaria, S. C.
R. C. Ellis, Lyons, N. Y.
Col. A. J. Summer, Long Swamp, Florida.
A. J. Bowman, Utica, N. Y.
A. Bradley, Mankato, Minesota.
F. Mackie, Utica, N. Y.

We are also manufacturing Sayre's Patent Horse Hoe and Potato Covering Machine, Sayre's Patent Cultivator Teeth in quantities for the trade; and all kinds of steel and swage work in the agricultural line. Send for a circular, SAYRE & REMINGTON.

Jan. 26—wtf Mar. 1—mtf. Union Agricultural Works, Utica, N. Y.

I. T. GRANT & CO., PATENT GRAIN CRADLE.

They are so improved as to be taken down and packed in boxes for transportation. One dozen can be packed in a box of about six cubic feet. We also make the Grapevine Cradle. All of the above are made of the best material and workmanship. For Price List, address

I. T. GRANT & CO.,

May 1—m12t Junction, Rensselaer Co., N. Y.

NO. 1 PERUVIAN GUANO.—Warranted Pure.

Superphosphate of Lime,

Pure Ground Bone, Land Plaster,

Lodi Manufact'g Company's Poudrette, &c.

Sold at the North River Agricultural Warehouse,

GRIFFING BROTHER & CO., Proprietors,

Jan. 1—m4t. 60 Courttandt Street, New-York City.

BEARDSLEY HAY ELEVATOR OR HORSE POWER FORK.—It is a gang fork worked by two horses, will elevate a load of hay at three or four forks full. For particulars send for a circular.

WILLOW CUTTINGS FOR SALE.

Also a great improvement in wire hop yards. Send for a circular.

LEVI A. BEARDSLEY, South Edmeston,

Jan. 1—m6t. Otsego Co., N. Y.

PIANOS, $150!—PIANOS, $150!!

RICH ROSEWOOD CASES---WARRANTED.

Having Rebuilt our Factory we are again Furnishing our

SUPERIOR PIANOS!

ALL PRICES AND STYLES.

Send for DESCRIPTIVE PRICE LISTS and CIRCULARS to

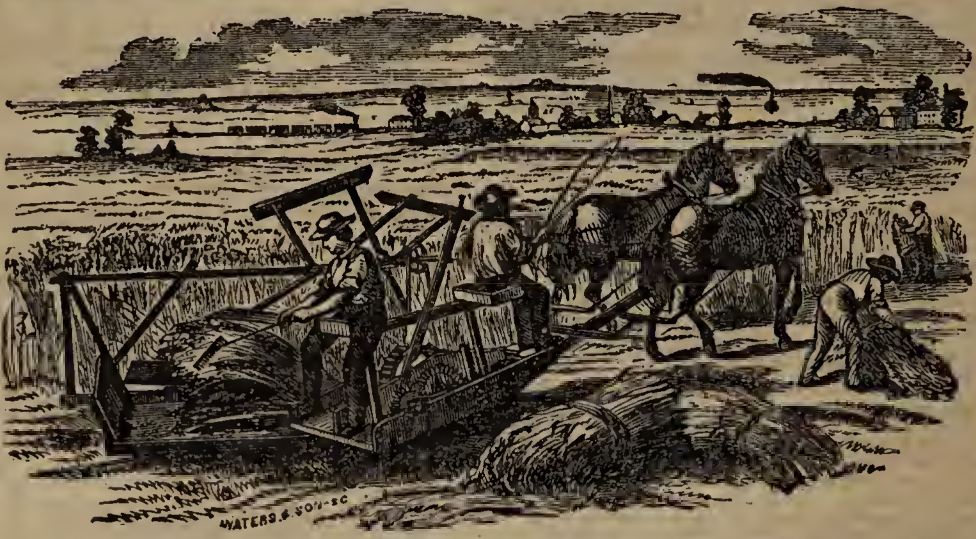
BOARDMAN, GRAY & CO.,
Manufacturers,
Albany, N. Y.

Jan. 3—weow3tm2t.

BEMENT'S AMERICAN Poulterer's Companion, price $1.25—Browne's American Poultry-Yard, price $1—Miner's Domestic Poultry-Book, price 75 cents. For sale at the office of this paper.

HOMES FOR THE INDUSTRIOUS

IN THE GARDEN STATE OF THE WEST.



THE ILLINOIS CENTRAL RAILROAD CO., HAVE FOR SALE

1,200,000 ACRES OF RICH FARMING LANDS,

In Tracts of Forty Acres and upward on Long Credit and at Low Prices.

THE attention of the enterprising and industrious portion of the community is directed to the following statements and liberal inducements offered them by the

ILLINOIS CENTRAL RAILROAD COMPANY.

which, as they will perceive, will enable them, by proper energy, perseverance and industry, to provide comfortable homes for themselves and families, with, comparatively speaking, very little capital.

LANDS OF ILLINOIS.

No State in the Valley of the Mississippi offers so great an inducement to the settler as the State of Illinois. There is no portion of the world where all the conditions of climate and soil so admirably combine to produce those two great staples, Corn and Wheat, as the Prairies of Illinois.

EASTERN AND SOUTHERN MARKETS.

These lands are contiguous to a railroad 700 miles in length, which connects with other roads and navigable lakes and rivers, thus affording an unbroken communication with the Eastern and Southern markets.

RAILROAD SYSTEM OF ILLINOIS.

Over $100,000,000 of private capital have been expended on the railroad system of Illinois. Inasmuch as part of the income from several of these works, with a valuable public fund in lands, go to diminish the State expenses; the taxes are light, and must consequently every day decrease.

THE STATE DEBT.

The State debt is only $10,106,398 14, *and within the last three years has been reduced* $2,959,746 80, *and we may reasonably expect that in ten years it will become extinct.*

PRESENT POPULATION.

The State is rapidly filling up with population; 868,025 persons having been added since 1850, making the present population 1,723,663, a ratio of 102 per cent. in ten years.

AGRICULTURAL PRODUCTS.

The Agricultural Products of Illinois are greater than those of any other State. The products sent out during the past year exceeded 1,500,000 tons. The wheat crop of 1860 approaches 35,000,000 bushels, while the corn crop yields not less than 140,000,000 bushels.

FERTILITY OF THE SOIL.

Nowhere can the industrious farmer secure such immediate results for his labor as upon these prairie soils, they being composed of a deep rich loam, the fertility of which is unsurpassed by any on the globe.

TO ACTUAL CULTIVATORS.

Since 1854 *the Company have sold* 1,300,000 *acres. They sell only to actual cultivators, and every contract contains an agreement to cultivate. The road has been constructed through these lands at an expense of* $30,000,000. *In* 1850 *the population of forty-nine counties, through which it passes, was only* 335,598 *since which* 479,293 *have been added; making the whole population* 814,891, *a gain of* 143 *per cent.*

EVIDENCES OF PROSPERITY.

As an evidence of the thrift of the people, it may be stated that 600,000 tons of freight, including 8,600,000 bushels of grain, and 250,000 barrels of flour were forwarded over the line last year.

PRICES AND TERMS OF PAYMENT.

The prices of these lands vary from $6 to $25 per acre, according to location, quality, &c. First class farming lands sell for about $10 to $12 per acre; and the relative expense of subduing prairie land as compared with wood land is in the ratio of 1 to 10 in favor of the former. The terms of sale for the bulk of these lands will be

ONE YEAR'S INTEREST IN ADVANCE,

at six per cent per annum, and six interest notes at six per cent., payable respectively in one, two, three, four, five and six years from date of sale; and four notes for principal, payable in four, five, six and seven years from date of sale; the contract stipulating that one-tenth of the tract purchased shall be fenced and cultivated, each and every year, for five years from date of sale, so that at the end of five years one-half shall be fenced and under cultivation.

TWENTY PER CENT. WILL BE DEDUCTED

from the valuation for cash, except the same should be at six dollars per acre, when the cash price will be five dollars

Pamphlets descriptive of the lands, soil, climate, productions, prices, and terms of payment, can be had on application to

J. W. FOSTER, Land Commissioner,
CHICAGO, ILLINOIS.

For the name of the Towns, Villages and Cities situated upon the Illinois Central Railroad, see pages 188, 189 and 190 Appleton's Railway Guide.

THE CULTIVATOR

THIRD] TO IMPROVE THE SOIL AND THE MIND. [SERIES.

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NOTES FROM THE SUSQUEHANNA---III.

The Susquehanna Valley Agricultural Society has its head quarters at Unadilla, where it has held three or four annual exhibitions with increasing success. Its members, and those of the Town Society of Bainbridge, co-operate heartily with one another, and the best of feeling exists between them, as well as between the two towns in other respects. The drive from Bainbridge to Unadilla, up the river valley, is one of about ten miles; there had been quite a deputation from the latter place present at the lecture the night before, and a party from Bainbridge returned the call by accompanying me to Unadilla Thursday afternoon, after the sight-seeing described in my notes last week was concluded. The officers of the Susquehanna Valley Society are:—President—IRA E. SHERMAN; CLARK I. HAYES, Treasurer, and R. W. COURTNEY, Secretary.

Our first call the next morning was upon Mr. HAYES, whose health had not admitted of his going out at all for some days previously, but who nevertheless undertook the task of showing us the improved stock in which for several years past he has been taking so much interest. Although engaged in banking, Mr. H. carries on a farm of 170 acres, and his father who died in 1857 at the advanced age of more than eighty, was one of the early pioneers in this part of the State—his business for a long period, consisting of grazing upon an extensive scale, buying steers at two years old, which could then be had at from $12 to $20 per head, and disposing of them after a twelvemonth, at from $50 to $75 per pair. In the purchase and sale of stock, his experience thus became very great, and the practice acquired by Mr. Hayes in acting for his father, enabled him to judge in what respects improvement was especially required in the common cattle of the country, and, together with a natural taste for the subject, was an excellent fitting for his present undertakings as a breeder. He began with Short-Horns three or four years ago, rather with the view of bringing improved blood more within the reach of the farmers of the Susquehanna Valley, than for any other purpose, and his purchases have been of the best "blood," and such in individual character as he thought likely to prove of the greatest practical service. He has had some excellent animals from the importations and breeding of Dr. WENDELL of Albany, F. M. ROTCH, Esq., and Messrs. B. & C. S. HAINES; the present herd including nine females, and young stock sired by "Marmion" and "Lord Oxford," and thus or otherwise running back to a long line of "distinguished ancestry."

Finding however, that in a dairying country other crosses are sought for, and in order that his neighbors, if they could be induced to breed with greater care, might exercise a choice of their own in the premises, Mr. Hayes was subsequently induced to purchase an Ayrshire bull and cow, "Dandy 7th" and "Maggie," from E. P. Prentice, Esq., of this city. From this cow he has now had three heifer calves in succession, and expressed himself highly pleased with the result of the cross-bred or grade Ayrshire stock for dairying purposes—mentioning casually as we were canvassing the question of breeds, that a number of Scotch dairy farmers, at a distance of thirty miles away, have hired the bull for the past two years at $75 each season, and that the oldest of his full-blood Ayrshire heifers, having calved when still under two years old, has produced, during its first year in milk, over 200 lbs. of butter. Mr. Prentice's experience has shown that Ayrshire milk has given 1 pound of butter to 6 quarts of milk, while with ordinary cows Mr. H. doubted if fully 12 quarts would not be required, in addition to which the Ayrshire has an advantage over the Short Horn in the fact that it appears to bear harder feed and treatment, although experience in the results of dairying with Short Horn crosses leads Mr. H. to entertain a high opinion of them for the purpose, under proper keep.

With regard to the age at which a heifer should be permitted to come in for the first time, the opinion is a common one that the younger she is, the more fully her milking properties will have the opportunity of development, but this is doubtless at a sacrifice in regard to size, &c., and I learned that the dairymen occasionally, after obtaining a calf from a two-year-old, allow a year to pass by without breeding from her again, in order that greater maturity in frame may be obtained. This matter, however, brought up as it was by the mention of the Ayrshire heifer above alluded to, has led us away from the barnyard and stables, where we also saw two Alderney heifers bred by Taintor of Hartford, and a young Alderney bull, which may be christened "Zouave," from the same herd, sired by the bull "Splendid," now owned by Mr. Rotch. This will be an infusion of blood calculated, I can but think, to add a fraction to the already good prices at which the butter of this region is marketed in New-York; and the three breeds, Short Horn, Ayrshire and Alderney, being thus placed, as it were, on trial side by side, I trust that Mr. H., either personally or through the Society of which he is so prominent a member, will endeavor to encourage carefully conducted experiments as to the respective improvements which each is capable of bringing about in a butter-making country. This was a topic of so much interest, that the *Essex pigs* we might have seen were overlooked, and other points in farm management had scarcely a word of notice in our conversation.

We made several other calls—one upon Mr. H. C. Gregory, whose barn we had noticed in passing it the night before, and who was one of the originators of the Society—another upon President Sherman, whose 300 acres or more of land lie across the river in the town of Sidney, Delaware county—but the time was short, and our stops were necessarily brief, and we had to give up seeing many good farmers and warm friends of the Country Gentleman where we should have much enjoyed a passing visit—such, if I may venture to mention names, as Ex presidents David Hough and David Lee, M. B. Luther, Messrs. Peck, Chapin, and others. And in the afternoon in going to Franklin, where there was a lecture before the Farmers and Mechanics Club, there were re called the names of such dairymen as S. L. Wattles, whose butter I was told always rates as A 1, and who aims to reach about 250 lbs. per cow, and Walter Wattles, Seth and Thomas Bartlett, William and Ralph Dewey, &c., who yield to very few either in the quality or quantity of what they make.

R. H. Van Rensselaer, Esq., whose herd of Devons has been so long and favorably known, although having withdrawn three or four years since from his former prominent position as an extensive breeder, has lost none of his fondness for their uniform color and compact symmetry—a taste he still gratifies in caring for a few of his old favorites—among them imported "Lady Bird" and her descendants, and a very pretty lot, male and female, of their younger but scarcely less note-worthy relatives. Occasionally able to spare an animal or two from their number, —the possession of a bull or cow from the "Van Rensselaer Devons" is enough among the farmers, far or near, to give their cattle a stamp of superiority which few care to compete against at the Town and County Shows. Among his other pets are the Grey Dorkings and the Lop-eared Rabbits, for which Mr. V. R. and his neighbor Mr. Rotch, have shown a marked preference, resulting in numerous importations of both during years gone by, and in their wide dissemination throughout the country.

About half a mile to the southward, is the residence of Francis Rotch, Esq., an Ex-president of the State Ag. Society, and his son, Hon. F. M. Rotch, whose duties in the Senate of the State, confine him at Albany at this season of the year. Mr. R. senior was at home, and we had a pleasant call—surrounded in the library by the portraits of his farm-yard favorites, displaying in their execution the same skill which has been shown without in the breeding and management of the originals. With regard to the stock, we must confine ourselves, as we have been forced to do in other cases, to limits much less extended than the importance of the subject really demands. In "Lord Oxford," by "Duke of Gloster," out of "Oxford 13th," we have a specimen of Thorne's Short-Horns, from the pedigree of which, much would be anticipated by those familiar with the subject. However great the anticipation, there could be no disappointment in seeing and scrutinizing the results of this pedigree as manifested in the animal himself. I do not not know that I have ever seen an animal possessing greater "style," a finer front, and leaving throughout less room for criticism—I speak of him from the impression made as he first stepped out of his "box;" and the mere fact that he weighs in the neighborhood of thirty hundred, will show that he is not deficient at least in point of size. But when on farther examination we find this size so symmetrically put together, and so many "points" from crops to twist, in which the development attained is remarkably good—the geometrical attributes of "solids," length, breadth and thickness, well carried out, and the "Oxford touch" in quality, combined with a fine roan in color—we begin to think the bull is one about which the public at large should be better "posted up."

An effort has been made to obtain him in California, whither Mr. Rotch has concluded heretofore several sales of very valuable animals at corresponding prices, but the amount offered, $2,500—which looks tolerably large in these times—has been *refused*, in the belief that there is no source at present from which the loss of the animal could be fully repaired; for while Mr. Rotch, with his nice views of what constitutes perfection, assured me that "Lord Ox-

"ford" did not *entirely* meet them,—perhaps in the quarters for instance—I can only repeat what was intimated at first, that I know of very few bulls here or elsewhere which will reach a similar standard of general excellence. Among the cows, there are "Grand Duchess," one of the only four or five sired in this country by "Grand Duke;" "2d Grand Duchess," from whose calf, sired by "Lord Oxford," considerable expectations may be entertained, but we must pass these by, together with the Alderneys, with scarcely a glance—the bull of the latter breed, "Splendid," although exceedingly nice of his kind, scarcely bearing the contrast with Lord Oxford to particular advantage.

"OAT-GROWING FARMING."

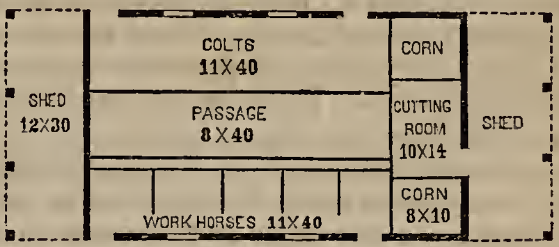
In some sections of our country—the hilly and frosty grazing regions perhaps—oat-growing farming (as far as grain raising is concerned,) may possibly be pursued with fair success. But in sections suited to the cereal crops, we find it more followed on rented farms and by the poorer class of farmers, than by those who own farms, especially if they are desirous of improving their fertility and productiveness. Perhaps we shall be better understood if we first define what we mean by "oat-growing farming." It is the cultivation of a farm mostly in this grain, with the least possible labor, and the most show of return for the same—mere plowing and sowing a large surface, and harvesting the crop. It secures in *favorable seasons*, a good many bushels of cheap grain, and large stacks of straw, and not much else in the way of farm crops. As generally pursued it rapidly exhausts the soil, as most of the grain is sold, and but little account made of the straw, or of any means of making manure for the farm. The rotation of crops is oats this year, and oats next, with a sprinkling of grass seed, which does not catch very well, so the land is again plowed up, sown to oats, and seeded again to grass, with no better success than before.

"Oat-growing farming" does not usually agree with success in any other branch of agriculture. It spoils the dairy, because if largely pursued it ruins both pasture and meadow; the rotation is too frequent for grass, the manuring too meagre to secure anything beyond a single crop. For the same reason it is difficult to keep sheep successfully, or to raise first rate stock. Its influence dwarfs the corn-field in size and product, and turns the wheat to chess,—these are crops which will not take the second place in the attention of the farmer—products which no one can produce for any long time successfully without improving the character of his soil, and rendering it *good* for most other crops.

We have not a word to say against growing oats in their proper place and turn, and for their proper use, but we do protest against the crop as the main dependance of a farmer for the purchase of his breadstuffs, &c., because we have frequently seen it tried and never knew it to succeed in anything but in running a farm into barrenness and weeds. On this point, a practical writer of the dairy region, in our last State Transactions, says, "We have heard the remark from farmers, that their land was more natural to oats than to wheat, and they could raise oats to sell, and buy their wheat easier than to raise it. The same men are apt to complain, after oating their land pretty well, that the grass seed did not catch, and they could not get a sod on the ground; when the fact is, *the land is too much reduced to produce anything but weeds.*" He adds what is unquestionably true, and a remedy for all the evils of oat-growing farming, "There is no danger of injuring the farm by raising oats, if they *are fed out*, and *the manure is put back on the land.*"

It is *easier*, as far as labor is concerned, to raise oats and buy wheat, than to raise wheat—that is, in sections not specially adapted to wheat-growing. But the labor required to grow wheat successfully tells on the whole character of the farm—it necessitates manuring and good culture in this and other crops—while oat-growing as generally pursued, is only another draft on the fertility of an already worn soil. And when oats are grown for feeding out on the farm, the return of the manure, with that from other products of the farm, will improve it—enable it to produce larger crops of grass, corn, oats, and wheat, or anything else to which it may perhaps be devoted.

We have pursued this subject farther than we intended at setting out, but it may be useful if it operates as a caution to any one pursuing this course. A farmer, with one or two hundred acres of land, cannot sell six to twelve or fifteen hundred bushels of oats year after year, without reducing his farm, and he can reduce it lower and *scarcely know it*, than with any other crop.



Ground Floor of a Stable.

Messrs. L. Tucker & Son—I send you a sketch of the ground floor of a stable I am now building for my farm horses, which I think about as good as anything in this country. W. H. A.

Best Way to Keep Eggs.

Messrs. Eds.—Taking it for granted that you would like to give your readers the best mode for preserving eggs, I send you a plan which I have tried with success.

On October 1st, 1860, I put up three crocks of eggs, containing about two dozen each. They were prepared as follows:

Crock No. 1—Covered completely with salt.
Do. 2—Greased completely with soft lard.
Do. 3—Greased and then put in salt.

The object was to fill up the pores in the shell, and thus prevent evaporation.

I obtained the following result: The last ones were opened February 15th inst., after being in the crocks over one hundred and forty-eight days, and were found to be as good as when put in, almost five months before. The loss of the meat was almost imperceptible.

You see by my report that all the plans I adopted, were good; but I would recommend salt alone as most convenient. Salt is much cheaper than lard; it can be used over and over again for the same purpose, is much cleaner, and is much less trouble in putting up than lard.

This plan of putting up eggs in salt is old but good, and I think if your city subscribers would try it, they could save enough during the year coming in, to pay for the Country Gentleman next year. C. G. F. *Berry Hill, Pa.*

Patience in Milking.—A writer in the Ohio Farmer says that a cow was cured of holding up her milk, by patiently milking until she ceased to hold it; and by continuing the practice, she has become an easy regular milker, and a good cow.

EXPERIMENTS WITH MANURES.

The Secretary of the Maine Board of Agriculture invited farmers to try experiments to determine *the best depth for manure.* Four experiments were made—each with manure at four different depths,—1st, 8 inches; 2d, 4 inches; 3d, harrowed in; 4th, left on the surface. The results were not striking, but rather unsatisfactory, and we give them for what they are.

The first experiment was made by WM. GRINNELL of Penobscot county. The crop was corn—10 cords fresh manure per acre—one-fourth of an acre for each experiment. The first,—buried 8 inches,—gave 31 bushels of ears; the second,—4 inches,—gave 32 bushels; third,—harrowed in,—32 bushels; fourth—on the surface—33 bushels. Soil gravelly, season dry.

The second experiment was made by AUGUSTUS SPRAGUE of Androscoggin county. Soil, clayey loam, rather moist. Crop, potatoes. Manure fresh, 12 cords. The first quarter, manure 8 inches deep, at the rate of 202 bushels per acre—second, 4 inches, 218 bushels per acre—third, harrowed in, 213 bushels—fourth, on surface, 200 bushels.

The third experiment by SAMUEL HASKELL, Cumberland county. Soil light, sandy—manure fresh, 6 cords to the acre—crop, potatoes. Product of first quarter,—manure 8 inches deep,—27 bushels. Second quarter,—manure 4 inches, 26½ bushels. Third quarter,—manure cultivated in,—34 bushels. Fourth quarter,—manure spread on top, 34½ bushels.

The fourth experiment, by S. F. PERLEY, Cumberland county, was performed on gravelly loam—8 cords, "strong yard manure" per acre—crop, corn. Product of first fourth of an acre, 269 pounds of corn in the cob. Second fourth, 230 lbs. Third fourth, 253 lbs. Fourth quarter, 272 lbs. Season dry.

There are many causes which influence the results of such experiments, and therefore so few trials cannot establish a principle. We give them merely as contributions.

The first thing that we observe, is the little difference in the results of each kind of treatment—not greater than might often be expected from variations in the character of the soil. We think the latter cause may be the reason why the corn was so much less in the fourth experiment on the land manured four inches deep; or it may have made the soil too dry. All the soil was dry with one exception, and the surface manuring appears to have protected it very favorably from drouth. In the second experiment, where the soil was moist, this favorable result did dot take place.

It is not probable that there was really much difference between the third and fourth modes of treatment, as the surface manure must be soon mixed up with the top soil by the act of cultivation.

Several considerations and variations suggest themselves in these experiments.

1. The quantity of fresh manure was too large to apply with advantage at a single depth, without first harrowing it well to break it fine and mix it with soil—doubtless with this care, it would have acted more efficiently, besides preventing the effects of drouth, which no doubt acted injuriously when the large masses of coarse fresh manure were buried only four inches deep.

2. If the manure could have been applied in autumn or winter, on freshly plowed land, a part would have soaked into the soil, and the rest might have been better pulverized with the harrow in spring; and both being plowed under then to a moderate depth, it would have doubtless acted very efficiently.

3. If so large a quantity could be applied partly on the surface and partly plowed in, it would have unquestionably produced a better growth of the crop.

◆

Experiments in Top-Dressing.

Mr. R. S. Rogers of South Danvers, Mass., contributes to the N. E. Farmer, a very interesting account of five experiments in top-dressing a meadow the past season, which we copy and condense below. He selected in April last a field of uniform sward, free from shade and other objections—"and staked out five several lots, each measuring 250 feet long by 45 feet wide, and top-dressed them with the various fertilizers, as follows:

No. 1.—2 cords of manure well rotted and mixed with 1½ horse-carts of soil.
No. 2.—120 bushels leached wood ashes.
No. 3.—2 cords green cow manure, the droppings of only a few days before.
No. 4.—80 bushels unleached or dry wood ashes.
No. 5.—255 lbs. Peruvian Guano, mixed with 1½ horse-carts of brook-mud.

"The cost or value of the top-dressing, for each lot, was as near ten dollars as possible. The grass was very carefully cut, and made the first crop in July, the second in September, and accurately weighed, yielding as follows:

	First Crop.	Second Crop.	Aggregate.	
No. 1,	790 lbs.,	380 lbs.,	1,170 lbs.,	Compost.
No. 2,	680 "	440 "	1,120 "	Leached ashes.
No. 3,	960 "	640 "	1.600 "	Green cow manure.
No. 4.	900 "	550 "	1,450 "	Dry ashes.
No. 5,	1,300 "	370 "	1,670 "	Peruvian guano
	4,630 "	2,380 "	7,010 "	

Upon these results, and in explanation, Mr. Rogers remarks: "The early spring was very dry, and quite a drouth prevailed during the months of April and May. This, no doubt, retarded vegetation, and checked, particularly, the fertilizing qualities of the ashes, as they laid in the sward for a length of time, as dry as when first spread. The copious rains, afterwards, produced a wonderful change in thickening up of the grass. The guano dressing produced much the largest quantity on the first crop, although very little more than the green cow manure with the aggregate of both crops."

Mr. R. thinks guano acts almost exclusively on the first crop, and is of the opinion that next season the green cow manure will be found superior and more reliable than either of the other fertilizers, as a general dressing. We hope he will weigh the crop and report the result for several years to come.

◆

CULTURE OF CELERY.

A correspondent of the Co. GENT., in Wisconsin, in ordering a copy of Roessle's book on Celery Culture, adds: "I live in 44½ deg. north latitude, and raised celery last year here from 4 to 4½ feet high, and blanched from the root to the very top, and have a large quantity now in perfection. I have no trouble in keeping it until June. I sent a quantity of it to my friends in Chicago and Milwaukee, and they all say that they never saw any thing to compare with it. If I can get a book that will learn me how to beat what I now raise, I shall not think it much of a humbug, though I think any man can tell all he knows about raising and preserving celery for twenty-five cents." Will not our correspondent inform our readers how he has succeeded in growing and preserving his truly magnificent celery?

◆

POTATOES.—We particularly invite attention to the advertisement of Mr. GOODRICH of Utica, in relation to his Seedling Potatoes. Mr. G. has devoted many years of intelligently directed labor, to the production of new and more hardy varieties of potatoes, in which he has been in a high degree successful; and we can but hope that he will receive the reward due to his persevering and long continued efforts.

THE CLOVER PLANT---SEEDING, Etc.

The importance of the clover plant to American Agriculture, will excuse (if excused it need be,) an annual presentation of the subject at the season for seeding to this crop. Still we shall seek to avoid repeating the same thoughts as far as may be, though there is authority for "line upon line, and precept upon precept," in urging all matters of moment upon the attention of those concerned in their application.

The common red clover (*Trifolium pratense,*) is evidently a denizen of cultivated soils, and propagated and preserved only through the care of the agriculturist, as it differs materially from all wild or natural varieties, and if left to itself soon disappears before other kinds of herbage. It was at first, and for a long time, according to Thaer, cultivated in gardens and isolated plots in pleasure grounds, probably for the beauty of its flowers. At last several observing farmers tried it as a forage plant, alone and in mixture with cereal grasses. "Since that time," (probably in the 15th century,) says Thaer, "clover has been regarded and used by many persons as the basis of Agriculture,* and the pivot on which it should turn; but with various results, according to the nature of the soil, and perhaps also of the climate. * * Finally, the system of alternate culture has assigned to clover a place in which it is sure to succeed, even on a soil not well adapted to its production. In this place (in rotation with other crops,) clover yields an advantageous produce, and at the same time maintains the soil in a favorable condition for the following crop."

There are two varieties of red clover, commonly known as the large or pea-vine clover, and the small. Of the former kind, Mr. Geddes remarks that it "is but little cultivated, and is generally considered of less value for hay and pasture, and yields but a single crop of hay in a season; but when wanted for manure only, it is sometimes preferred for its heavy growth." The small kind will produce two good crops in a year, or one of hay and one of seed, on good soils. The Italian or Crimson clover is another variety, introduced by the Patent Office, but not yet grown except for its handsome flowers. It is an annual, of strong growth, readily eaten by stock, and hardy, continuing to grow and blossom until severe frosts occur, and may prove on further trial a valuable forage plant.

The soils most favorable to clover are those containing both lime and clay, not too great a proportion of the latter, but rather what is known as a clayey loam. On such a soil in a proper state of cultivation, "it is, as it were," to use Thaer's expression, "in its native abode; nothing is required beyond the spreading of the seed—the clover gets the better of all the plants that grow around it." It will thrive on all soils of sufficient depth and fertility, if favored by a season of sufficient moisture. Sandy loams, however, are often deficient in lime and also overcharged with acid, as shown by the growth of sorrel and dock; in such situations these plants are apt to overgrow the clover, nor will plaster have much tendency to prevent it. Ashes, or manure, will arrest this evil so that clover will succeed finally, and it is said that a mixture of ashes and plaster is much the best top-dressing for such lands, if not for all when in clover.

Clover is not sown alone, but with some other crop, because it rarely yields a very large crop the first year, and in the early stage of its growth, it is much assisted by the protection of another plant which may afterward give up the ground to it. "The sooner," says Thaer, "the crop with which clover is sown is harvested, the greater the strength of the clover." We had occasion to observe facts the past year, bearing somewhat upon this observation. A field, by the re-arrangement of the fences, included several kinds of grain; all were seeded to clover, so as furnish a large meadow for another year. The part devoted to winter wheat was seeded first, and is probably the best portion of the clover, owing mainly, no doubt, to the longer time after wheat harvest, which allowed it to become better established. The portion seeded on spring wheat is next best—the grain started up well, and was cut earlier than the portion in oats, where the clover is the lightest. The latter crop was also badly laid by the winds, thus hindering the growth of the clover—it was also harvested considerably later than the others. A narrow strip along one edge of the field, was seeded to flax and clover seed at the same time, but the flax-seed not growing, left the clover the only crop—except weeds. The land was rich, having been occupied as a lane for many years, and the clover crop was a fine one, still hardly equal to that on the winter wheat. Both portions gave occasional blossoms. The whole field, it should be remarked, was sown with plaster at the usual time.

Thaer especially commends the sowing of clover with buckwheat, on land not very well adapted to its growth, saying that he has seen it succeed much better than with other spring crops. Flax is also a favorable crop for seeding with in his opinion. In regard to clover on other crops, Mr. Geddes remarks:—"It is sometimes sown on oats, barley and spring wheat; but as it can be sown before the spring frosts are over on winter wheat, it is more certain to be covered by the freezing and thawing of the earth, and for this reason success is more certain than with any other crop."

Last season, (Co. Gent. April 12, 1860,) we discussed at considerable length, the various causes "why clover and the grass seeds did not vegetate as surely and grow as thriftily as other sown crops," and proposed different remedies applicable in each case—at least in our own experience. These we will recall in brief.

One cause of failure, from which we have suffered more than from any other, is that a drouth occurs in early summer, before the young clover gets sufficient growth to withstand its effects, and is burned or dried up. Remedy —Early sowing as may be, and manurial aid to induce a prompt and vigorous growth. On our soils plaster furnishes such a stimulant, and almost invariably insures success. A light top tressing of manure on spring grains is equally beneficial, and if the soil is not very fertile, should be given in addition to the dressing of plaster.

A second cause of failure is the deep covering, or no covering given to the seed. On winter grain, if sown in March, the frost will furnish a proper covering for clover seed; on spring grains the use of the roller—sowing the seed after the other grain is harrowed in, and then rolling down, will usually cover sufficiently. Or a light brush harrow may be passed over the field, or a light harrow in the usual form, made particularly for this purpose.

Another cause of failure is, that the land is run down to a very low state of fertility before it is seeded to grass. The remedy is to seed sooner or to apply the manure—both have been proved of efficacy.

The value of plaster or gypsum in the culture of clover, has recently received considerable attention in our columns. Its importance can scarcely be overrated, nor can the place which clover should hold in every improving system of rotation, be filled by any more cheaply produced or more useful crops.

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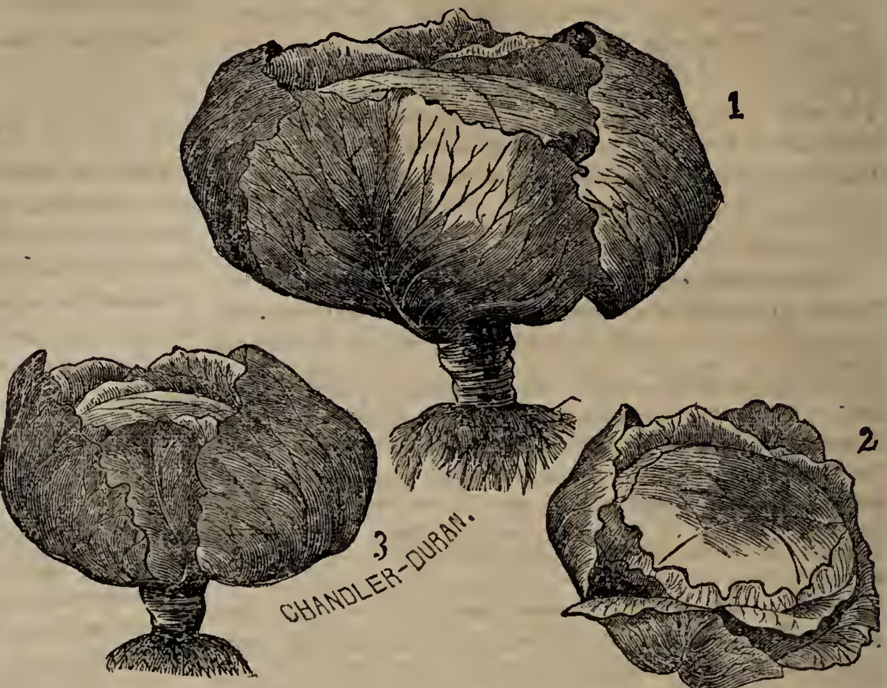
* It is still so regarded. Mr. Geddes opens his chapter on Practical Agriculture, in his "Survey of Onondaga Co.," with these words: "The agriculture of Onondaga county is based on the clover plant. It is used for pasture, for hay, and for manure. Strike this plant out of existence, and a revolution would follow, that would make it necessary to learn everything anew in regard to cultivating our lands."

THE CULTIVATION OF THE CABBAGE AND PERPETUATING VARIETIES.



For cultivating a small fancy patch of cabbage, there are a great many fanciful directions floating about the agricultural press, most of which, by the stress laid on non-essentials, serve but to raise a smile on the face of the farmer who devotes broad acres to the Brassica family. Before our farmers can enter on the cultivation of cabbage as a standard crop, and around all large centres of population, particularly where the Irish and German elements preponderate, it speedily becomes a standard crop, it must be a matter that with him has progressed far beyond a mere fanciful experiment. He must have acquired that degree of knowledge and experience, which will enable him to drop his seed into the ground with as much reliance on the results as with his corn or any other standard crop.

I propose to present in this article a few directions, which, if faithfully carried out, will enable any farmer whose soil is of good natural strength, to attain this end. The three engravings are drawings from nature, of the three varieties of Drumhead cabbage, which originated in Marblehead, Mass., and from their tenderness, sweetness, reliability for heading and hardness of the heads, have become the standard fall and winter varieties in the markets of Boston, Salem, Lowell, and most of the large cities of New-England. No. 1 represents the *Marblehead Mammoth Drumhead*—No. 2 the *Mason Cabbage*, and No. 3 the *Stone-Mason*.

How were these characteristics of sweetness, tenderness, reliability for heading, and hardness of the head, secured and made permanent, are questions of general interest to every progressive farmer, on which I will present a few remarks. But, first, how shall we raise an acre of cabbage? Let the soil selected possess a good degree of natural strength—if it has a small per centage of clay in the subsoil, so much the better. Do not make the common mistake of selecting land that is too moist—when corn thrives, it is sufficiently moist for cabbage. If possible take sward land, on which, aside from other advantages, the young plants are less liable to injury from the cut-worm. If sward land is selected, (and it is as good as a general rule,) let it be broken up in early fall, that the sod may rot to a good degree before the coming of heavy frosts.

Now form the compost heap. On the piece devoted to cabbage, form a rich compost heap that shall make from six to ten cords of strong manure. With us on the sea-coast, such a heap will usually contain for its components, night-soil, muck, sea-manure, and barn manure, about one-fourth of each, to which is added about one-sixth additional of beach-sand, which serves a capital purpose in "cutting" the manure, as our farmers term it, which means that when the manure has been pulverized it tends to keep it so. With us a basin is made of the muck, and the night-soil poured into this, to which is added the barn and sea-manure. Neither night-soil, sea-manure, or muck, are absolutely necessary for success, though as cabbage is a hearty feeder, they greatly facilitate matters, and to fully succeed with so large a cabbage as the Marblehead Mammoth, night-soil, or some other powerful manure is indispensable. I have succeeded admirably with stable manure on which hogs had run at the rate of three hogs to two horses—adding, however, a small quantity of ashes and guano to the hill. But whatever enters into the compost heap, let it be most thoroughly pitched over two or three times, with short intervals between, until it is well *pulverized* and *commingled.* The difference between those who succeed and those who fail, in the use of the strongest manures, such as night-soil, glue manure and the like, for the most part lies just here, in the degree of *pulverization* and *thoroughness* of commingling.

How shall we apply our compost? If you apply all directly to the hill, you do so with two risks, viz., that the ground beneath the young plants will soon become so dry as to kill them, or that when the plants become of size, the maggot or stump-foot will take the root. A better plan is to apply but a third to the hill, and the remainder broadcast, which will result in giving the cabbage plenty of food in its late growth, when, with the coolness of fall, comes its best growing weather.

How shall the ground be prepared? *Most thoroughly.* Give the acre two good plowings, if possible, and then a complete harrowing, and if then you run the cultivator across it a couple of times additional, so much the better.

Planting the seed. Yes, plant the seed in the hills where the cabbage is to grow, if for a fall or winter crop, but if for the early market, of course the plants will be started in the hot-bed. The advantage of planting the seed where the plants are to grow, (and the hills can easily be furrowed and cross furrowed,) is, that with your half dozen plants in each hill, you may consider yourself master of the cut-worm, the number of plants being plenty and to spare. As soon as the young plants break ground, be on the look-out for the black fly, so small as hardly to be seen, but sometimes a fearful devastator among the young cabbage plants. As soon as any small, light green spots are seen on the young leaves, know that he is at work, and sprinkle, when the dew is on, with plaster or lime *well air slaked*, and keep protected until the fourth leaf developes, when they have acquired a degree of toughness, and are past all injury from this tiny enemy.

Now for the cultivator and hoe. The general directions given by seedsmen is to plant too near to admit of the proper cultivation of a standard crop. We allow the Mason from 2½ by 2½ to 2½ by 3—the Stone-Mason 3 by 3, and Mammoth 4 by 4, and find that in the end nothing is lost by the liberality. It is almost impossible to work the cultivator with advantage, particularly after the plant has begun to develop itself, between rows whose original distance was less than 2½ feet, and I may add that it is impossible to develop a Drumhead cabbage, well proportioned and of good size, in rows that run nearer than this.

Our acre of plants will need thinning to two in the hill, when about the fifth leaf shows itself, and to one in the hill when they have spread to the diameter of a common saucer, leaving occasionally an extra one with the view of filling such blanks as the cut-worm, the hoof of the horse, a glance of the hoe from some stray rock, or a bounce of the cultivator, may make. Let the first cultivating be given just before the first thinning; the second just previous to the second thinning, and the third just as the tendency to set the head is evident. If time permits, a couple of extra cultivatings will be likely to show a favorable result in the gathering of the crop. Even cultivatings, to the extent of three, should be immediately followed by a hoeing, loosening the earth and slightly hilling it around the plant. If as the heads develop, they tend to crack slightly after heavy rains, do not always be in a hurry to market them; gently start the roots, which with our Stone Mason, will usually result in doubling the size of the cabbage.

Under such a system of culture, with seed of good varieties, grown from selected heads, and *wholly from the center shoot*, our farmer friends can hardly fail of finding their cabbage crop as reliable as their corn crop, and if the farmer becomes an adept in their cultivation, he may see what I have often seen, *every plant on an acre bearing a marketable head.* It matters not, in the northern and western States, whether the variety cultivated be as small as the Mason, or, like the Mammoth, as large over as a cart wheel, success will be equally certain, only let the manure be liberally applied for the larger sorts and the strongest land given them. In the south and south-west, I question whether the largest varieties, owing to the greater length of season required, which brings their time of maturity into weather too hot for their nature, can be cultivated with success. A field of well matured cabbages is not a type of grace, but in the symmetry of their proportions and rich bloom of the leaves, there is a degree of beauty.

Perpetuating Varieties.—The length of this article will permit but a few remarks under this head. This is the law: *Be true to nature and she will be true to you*—that is, before nature will grant you a new variety she demands of you a perfect model to copy from. Let the cabbage whose characteristics you wish to perpetuate, have those characteristics thoroughly matured; then grow your seed from the center shoot only. The history of the three varieties at the head of this article is a capital illustration. About 20 years ago No. 2 (the Mason,) was raised by the gentleman whose name it bears, from a package of mixed seed of various kinds of cabbage, originally forwarded from London. The farmers of Eastern Massachusetts having generally adopted the Mason, became desirous of obtaining a variety, which, to the good qualities of the Mason, should add a larger head, more settled down into the leaves with a shorter stump. Accordingly Mr. John Stone selected for several years the best models for these ends, modifying his models of one year by the slight tendency to sport in the direction desired, as developed by the plants of the next year. Soon the Stone-Mason (No. 3) was produced and perpetuated by adhering each season closely to the final model, avoiding, in selecting seed cabbage, all that evinced any tendency to sport, and growing seed wholly from the center shoot of well matured heads, thus perpetuating the tendency to head on a short stump.

Mr. F. Alley, desiring to develop a variety which should combine the qualities of the original Mason with the greatest size possible, to be developed in the north, by pursuing the same route, finally originated the Marblehead Mammoth. It has been assumed by some that difference in size in different varieties of cabbage, is to be measured by difference in manuring and general cultivation; while it is generally true that the largest cabbages of any one variety are those that have received the highest culture, yet it will be found to be equally true, that size alone may be the distinguishing trait of distinct varieties.

I will close with a single injunction. If you wish to perpetuate your selected varieties, after having selected your models, remember that the individuality of the plant lies at the point where the stump terminates, in the center of the head—(in this respect there is a striking comparison to the termination of the spinal marrow in the brain of the human species—in each it is the vital center,) and the seed grown from this is the only seed that carries with it the characteristics of the plant; all below that, tending to increase the length of the stump, decrease the reliability for heading, and in the course of but a few years producing but a worthless cumberer of the ground.

Marblehead, Mass. JAMES J. H. GREGORY.

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[For the Country Gentleman and Cultivator.]

REARING CALVES.

Eds. Co. Gent.—I see numerous articles on this subject, containing details in practice, which no doubt if well carried out, would secure the desired result. But there is a serious objection to most, if not all, of them—they consume too much valuable time. "Time is money," especially to the farmer; and if he can attain desired results by more simple methods, an important object is gained.

In the course of some thirty or forty years experience, I have invariably adopted the following method: The young calf is allowed to suck the cow for a few days—(that is whatever he may require)—until he gains sufficient strength and activity, which will be in ten to twelve days. During the latter part of this time, clover or other succulent green food, is given to the cow in such a manner that the calf may eat with her, which he will soon commence to do freely. Then the milk is drawn from one teat, and he takes the other three. Each successive week another teat is taken from him, until he is brought to depend entirely on grass, and is then turned to pasture; clover is is best. No water is given until the heat of summer begins to expel the juices from the grass. In this way I have succeeded in raising fine calves, and they all pass through the winter ordeal without any difficulty. During the long period in which this method has been practiced, I cannot recall to recollection a single failure.

R. M. CONKLIN.

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[For the Country Gentleman and Cultivator.]

POTATO BEER FOR BREAD.

The following recipe for making yeast bread, without the use of *milk*, I have used for two years, and like it much better than any other I have used. It raises much quicker, and keeps moist much longer than bread made in any other way.

Boil one dozen of medium sized potatoes in half a gallon of water. When thoroughly cooked, skim out and mash well. Then pour over them the water in which they were boiled, and add as much more cold water as is required to mix your bread with. When about milk warm stir in a quart of good hop yeast to a gallon of the beer, or more in proportion to the quantity you make. Let stand until morning; then sponge your bread with this beer; when light make up stiff; let rise again, work into loaves, and when light bake it. Anna.

Near Peoria, Illinois.

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[For the Country Gentleman and Cultivator.]

How to Prepare Quills for Pens.

Messrs. Editors—I find in your issue of the 21st inst., an inquiry, signed "A Farmer who Writes," asking information about "clarifying goose quills." The only clarifying a goose quill needs, to make it fit for a pen, is *thorough drying*. Take the quill, scrape off the epidermis, cut off the end that grew next the goose about one-eighth or one-quarter of an inch, then make a small hole as near the tubular junction into the solid part as convenient, in order to separate the pith, and when that is removed, hang the quills in bunches of one dozen, suspended from the ceiling in a dry room for six months, and as much longer as you can, and you will have an article of quill that will surpass any clarified quill that was ever cut. It will be elastic and *very durable*.

Ogdensburgh, Feb., 1861. V. R. COLE.

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Osage Orange for Hedges.

I notice some expressions of doubt as to the adaptability of this plant for hedging. Could the doubters ride with me for two hours, I might show them miles enough of fine growth of it to satisfy the most incredulous. With proper care it will turn all stock at four or five years old. The original cost is not greater than that of a board fence where lumber is worth $12a$14 per M.; and the annual expense of trimming is not greater than that of patching up old fences. N. N. N. *Delavan, Tazewell Co., Ill.*

DIRECTIONS FOR TRANSPLANTING.

1. First, have a good, deep, dry soil—well underdrained, if wet. Bad fruit is often caused by hidden water standing below the surface.

2. If not very fertile, it must be enriched by manure, which is best done a year or two before planting, as fresh, unmixed manure should never touch the newly set roots. Or strips of land eight feet wide for each row, may be deeply plowed with the dead furrow in the middle, (to promote drainage,) half a load or less of old manure or compost, placed for each tree, and thoroughly harrowed into the soil before setting.

3. If the ground has been well and deeply mellowed and enriched, the holes need be only large enough to receive the roots without bending; otherwise they should be five or six feet across, and a foot deep. On heavy land, inverted sods are good in the bottom. Large holes, filled with rich earth or old compost, will cause young trees to grow rapidly. Never place manure near the roots.

4. Pare off with a knife all bruised parts of the roots to prevent decay. Place the tree no deeper than it stood before—less deep is better than more. Fill the fine earth carefully among the roots, spreading them all out with the fingers. No cavities should ever be left among or beneath the roots, and the earth may be well settled among them by pouring in water when the hole is part filled. All except small trees need staking to protect from the wind.

5. Autumn and spring are both good seasons for transplanting—except that tender trees, as peach and apricot, do best in spring, unless on a dry bottom. The autumn is the better season to procure trees from distant nurseries, even for spring planting. They may be safely wintered by burying the roots deeply in earth, in a dry, sheltered situation. Trees should be always well shortened or cut in at the head, when set out.

6. *Good, clean cultivation, is of the utmost importance.* Neither corn, potatoes, nor fruit trees can flourish surrounded by weeds and grass sod.

7. Watering usually injures young trees by baking the earth. If necessary, lay the roots bare, pour on the water, and replace the earth. A rich soil, *kept mellow*, will not need water. Young cherry trees often die about midsummer, unless *mulched*, or with the earth about them covered several inches with old straw or other litter. Trees dried by long carriage, may be restored by immersion for a day or two in water.

Depredators and Diseases.—*Mice* are excluded by banking up a foot around every tree, late in autumn—*Curculios*, by jarring down on sheets daily, and by turning in pigs and geese—*Apple Tree Borers*, by punching to death in their holes with a small twig—and the *Peach Worm* by cutting out with a knife. *Fire Blight* in the pear must be instantly cut off far down, and the branches burned—and the *Black-knot* may be kept off the plum by prompt and continued amputation, beginning in time.

DISTANCES FOR PLANTING.

Apples, standard,....	25 to 33 feet.	Plums, standard,.....	15 feet.
Apples, dwarf,.......	5 to 8 feet.	Plums, dwarf,........	8 to 10 feet.
Pears, standard,.....	20 feet.	Quinces,.............	6 to 8 feet.
Pears, dwarf,........	8 to 10 feet.	Grapes, ...	10 to 12 feet.
Peaches, headed back,	12 feet.	Gooseberries & Currants,	4 feet.
Cherries, standard,..	20 feet.	Raspberries,..........	4 feet.
Cherries, dwarf, ...	8 to 10 feet.	Blackberries, ...	6 to 8 feet.

For the above distances, the following is the number of trees required for an acre.

At 4 feet apart each way,...	2,720	At 15 feet apart each way,....	200
" 5 " " ..	1,742	" 18 " " ...	135
" 6 " " ..	1,200	" 20 " " ...	110
" 8 " " ..	680	" 25 " " ...	70
" 10 " " ..	430	" 30 " " ...	50
" 12 " " ..	325	" 33 " " ...	40

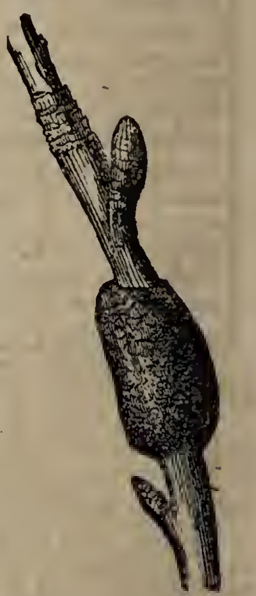
ORCHARD CATERPILLAR.

I have been trimming the orchard of John Gibson, Esq., and the enclosed specimens will show you what I found on some of the healthiest of his trees. Are they the larva of insects injurious to fruit or fruit trees? Will you answer, and confer a favor, or perhaps throw light in the path of pomologists in general. Thos. M. Blyth, *Gardener to J. Gibson, Esq.*

The twigs sent are encircled by the rings of eggs which hatch into the common orchard caterpillar. Although this insect is known to most old orchardists, it may be new in its different forms to many of the younger class; and as the present moment is the time that it is most easily destroyed, by taking it in the eggs, we give the cut of one of these rings, published many years ago in the American Fruit Culturist, with the short account of the insect in that work.

The Caterpillar, (*Clisiocampa Americana.*) This has been a most serious enemy to the apple in most parts of the country. It has its seasons of increase and decrease. Some years it has nearly stripped whole orchards; and again it has diminished in numbers in successive years, till few could be found.

There are many species which feed on the apple leaf; but the only one of importance, is that known as the *common orchard caterpillar*, which is hatched in spring as soon as the leaf buds begin to open. At this time, it is not the tenth of an inch long, nor so large as a cambric needle, but it continues to increase constantly in size for several weeks, until two inches long and a quarter of an inch in diameter. It then spins a cocoon and passes to the pupa state. In the latter part of summer, it comes out a yellowish brown miller, lays its eggs and dies. The eggs are deposited in cylinders or rings, containing three to five hundred each, encircling the smaller branches, and usually within a few inches of the extremity. The accompanying figure represents one of these masses of eggs of the natural size. They remain through winter, protected from the weather by a vesicular water-proof varnish, and hatch in spring, as just stated. Each collection of eggs, makes a nest of caterpillars.



One nest is enough to defoliate a large branch, and when several are on a tree, the size and quality of the fruit is seriously lessened.

The best mode for their destruction, is to cut off the small branches which hold the eggs during autumn or winter, and commit them to the fire. The most convenient implement is a long pole, armed with a pair of clipping-shears, worked by a cord; or a sharp hooked knife, on the end of a pole, will answer nearly as well. The eggs are seen at a glance, after a little practice; a cloudy day should be selected to prevent pain to the eyes. If this work is done just at the moment the eggs are hatching, it will be equally efficacious, and the webs or downy covering of the young insects render them conspicuous. Every nest of eggs thus removed, which is done in a few seconds, totally prevents a nest of caterpillars in the spring, and is far more expeditious and effectual than the usual modes of brushing off the caterpillars with poles, brushes, or washing them with soap-suds, ley, or white-wish.

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Profit of Sheep Farming.—A correspondent of the Columbus Field Notes, who keeps an account with his sheep, says "the increase of my flock and the wool makes a profit of about three hundred dollars a year, from 112 acres of land, and about twenty acres of that in woods, besides keeping enough other stock for my own use. I consider sheep the most profitable stock that I can raise; they give sure and quick returns."

[For the Country Gentleman and Cultivator.]

FARMING ON THE PRAIRIE.

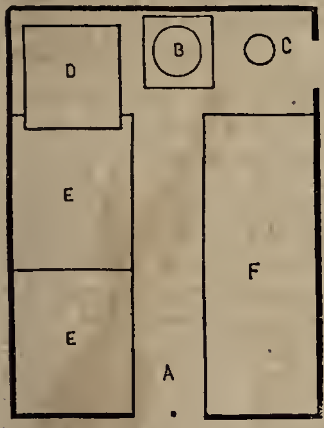
G. OF NORTHERN ILLINOIS TO B. OF WESTERN NEW-YORK.

A——, Lee Co., Illinois, Feb. 19, 1861.

My Dear B——. "Yours since '52." Yes and I am grateful for your friendly aid, and for the progress I have been able to make. I see "much land yet to be possessed," and believe one can learn more rapidly as they advance in an intelligent understanding of the great lessons of life and nature. * * One conclusion I have arrived at, is, that farmers must improve themselves if their farm stock and products are to be improved. This is a great fact—throughout the earth, man-culture and earth-culture are parallel. Another thing has impressed me of late; that the majority of our business men are not well trained, and that farmers, equally with others, need a *business education.* This need shows itself daily in myself and others with whom I have to do.

The first of the month I was again at Mr. C.'s. His Durham cow "Carnation" has brought a white calf, and it is a beauty. He keeps it in the same stable with three fine-wooled sheep, thinking it a good plan to keep sheep and calves together. The little fellow has seen some cold days, and once came near freezing.

I told you I thought C.'s swill-house a model, though small and of trifling cost, compared with its usefulness and value. You have the description below.



A. entrance into passage leading to fire-place B., where a seventy gallon cauldron or mush kettle, is placed in a brick arch with good chimney. C. is a well with pump and spout leading to the kettle. D. is a "steam box," about four feet above the ground, and projecting a foot or two over the swill-bin, E., and leaving space under the box for storing tools, fuel, &c. The steam-box is about four by four, and six feet in length. The swill bins are six by four and a half feet, and F. is a bin for meal or grain.

When we were at this mush factory in January, that huge kettle was full of golden corn pudding. The next morning it was dispensed to the swine still smoking warm, though the night had been cold, and the arch without fire.

Husking corn goes on yet—though the snow has been so deep for months that many have postponed, (one neighbor has sixty acres to pick.) I am nearly done, and *guess* I shall get 30 cents a bushel for my crop. One man, "poor as a rat" 14 years ago, grew last season 200 acres of corn, turning 12,000 bushels of shelled corn. I have over 2,000 from 40 acres.

My farm stock are all "troubled" with enough to eat, and they show its effects in growth, good looks, good manners and kindly dispositions. Such should be the fare, not only of animals, but the soil—it will pay in every department of farm husbandry. Yours truly, G.

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[For the Country Gentleman and Cultivator.]

WORKSHOPS ON THE FARM.

Much as has been written on this subject, there is room for more. Indeed it seems that much more will have to be written before farmers will appreciate this important appendage to the farm. A shop fitted up, 10 by 12, (larger would be better,) well lighted, and containing a bench furnished with a vice, together with a collection of carpenter's tools, something as follows—five augers, four chisels, three saws, three planes, a square, tri-square, hammers, drawing knife, bit stock and bits, a scratch awl, file, mallet, compass, &c., with places for everything, is about the kind of a shop and tools for the farm. A shop of the above description, where the farmer and his sons can spend their rainy days, is almost indispensable on every well regulated farm. There are rainy days enough every year for the farmer to keep his premises in good repairs without employing a carpenter, except for the large and important jobs, provided he has a shop with proper and sufficient tools, by applying them at the right time.

It is too often the case that the carpenter's tools are by far too scarce on the farm, a hammer, an auger or two, and a saw, constituting all the carpenter's tools on the farm. And it is nearly always the case that the general appearance about the house and barn indicate this, as, for example, gates off their hinges, or broken down, boards off the barn or fences, and a general slipshod appearance all over the farm.

There is another fact concerning farmers of this class, and that is that the numbers and kind of farming implements generally correspond with their carpenter's tools; consequently they are generally classed among those called *poor farmers.* On the other hand, a farmer who has sons growing up around him, if he has a shop he need never be at a loss to find employment for them on rainy days. A hundred little jobs are constantly waiting to be done, and besides furnishing employment (which is a great deal,) and giving the place a neat and tidy aspect by keeping things in repair; his sons are receiving invaluable lessons which will be of lasting importance to them. A boy brought up to use the bench and tools becomes at the age of sixteen a carpenter, or at least has acquired sufficient skill to perform all the rough carpenter's work on a farm. This has been a branch of rural economy much neglected by our farmers; but I am glad to see that farmers are taking a new interest in this important feature of the farm, and the heathenish practice of converting the kitchen into a workshop, is now nearly abolished. D. B. E. *Warren, O.*

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[For the Country Gentleman and Cultivator.]

TROUBLESOME WEEDS.

Rudbeckia hirta.—This plant, described by Mr. Goodrich in the last no. Co. Gent., has been recently introduced with grass seed in various parts of this county, and although not yet seen much, if at all, beyond the fields where it was sown, bids fair to become quite too common. It has been transplanted to the flower garden in some places, and may, perhaps, be disseminated in that way.

Spurry.—This troublesome weed found its way into several fields on my farm a few years since, and I have not yet been able to eradicate it entirely. Its growth is very rapid, and being rather small and inconspicuous, it is very liable to escape notice, especially if it happens to come up under some thick leaved plant, where its seeds are ripened quickly and abundantly, ready for dispersion. I wish to call the particular attention of those who think of sowing this plant to plow under, as I believe some of your readers have proposed to do, for I believe they will see cause to regret such a move.

Chicory.—This too, I think requires showing up, from the fact that it is sometimes highly recommended as a profitable crop, by correspondents of agricultural papers. It is quite common along the roadsides in the eastern part of this State, and last year I found a single plant of it on a field seeded the previous year upon my own farm, and a man in my employ told me that he found a single plant of it on his father's farm, some fifteen miles from this place. In my opinion, this is a plant which will make its way into our fields soon enough without our voluntary aid.

These three plants have been introduced into my fields with grass seed, a very common way of scattering noxious weeds about the country.

"Every worthless intruder should be regarded with a jealous eye, by the farmer," says Darlington, a caution which every farmer should heed, bearing in mind that the sooner he ascertains the character of every new comer and the more promptly he declares war upon the worthless, the more surely he will succeed in extermination and the labor will be diminished in a geometrical ratio

Ashfield, Mass. WM. F. BASSETT.

[For the Cultivator and Country Gentleman.]

Opportunities and Drawbacks of Farm Life.

BRATTLEBORO', VT., Feb. 12, 1861.

MESSRS. L. TUCKER & SON—I have your favor of the 8th inst., inclosing the correspondence of your friend "E." You request my views on the matters suggested in that correspondence; and I am happy to respond at once, only regretting that I have not leisure at this time to give you more than a hasty reply.

Some of the observations of "E.'s" Wisconsin friend quite surprise me. Having no personal knowledge of the agriculture of that State, I cannot say whether or no his remarks are correct as applied to farming there; but they would be incorrect if applied to New-England. The man whose ambition and aim it is to to acquire great wealth or support an expensive and showy style of living, will not be able to attain those ends by farming; but he who has a taste for and is content with a rural life, with those moderate but certain gains which with ordinary frugality enable one to live quite generously and independently, and with that happy combination of business and surrounding influences of nature and of home in the country, which so favorably conspire to give a family of children about the best early training in every respect they could have to prepare them for entering upon the duties and scenes of later life, may usually realize these ends in the pursuit of agriculture. A man owning 160 acres of land of a fair average quality and location in New-England, together with a cash capital of $2,000 to operate with, could hardly fail of doing well at farming, if he had industrious habits, a taste for agriculture, and good judgment to guide him. He need not necessarily lead a "slavish" life, toil "from early dawn to dewy eve," nor "make labor his early pleasure, and sleep his only recreation." On the contrary, he would, generally speaking, be less subject to harrassing toils and care, and run less risk of losing the reward of labor than men who follow the trades and professions.

Numerous instances might be named, for New England is full of them, of persons who began farming with little or no capital, running into debt nearly to the extent of the value of their farm; and yet by the legitimate operations of farming alone they have paid off every incumbrance upon the farm, lived very comfortably, brought up their children well, giving them good advantages of education, together with perhaps more or less of a "setting-out" when arriving at an age to enter upon life for themselves, and still have the farm left, and sufficient personal property with it to make them comfortable and independent in old age. Not unlikely some of these children have grown to be now the foremost men of the nation, whether as leading business men in the large cities, or as statesmen, or persons distinguished for ability in various other walks of life. If we examine the history of the leading men of the day, no matter in what department or calling, we find that a very large share of them had their nativity and early training on these farms in the country, and what is more, the successors of these men will, in a very large degree, be again supplied from these farms.

I have this moment in mind one of the best farmers in Vermont, an active and able Director in our State Agricultural Society, who at an early age was left an orphan and penniless, and was bound out by the town authorities for a support during his minority. After the age of twenty-one years, he worked for wages at farming a few years, thus accumulating a few hundred dollars, with which he commenced farming on his own account, paying a small sum down towards the purchase of his farm, and mortgaging a large remainder of its value, to be liquidated in after years by annual payments of a stipulated amount each. He now owns his farm clear, a large and valuable stock of animals, substantial and superb buildings, &c., all paid for; has given his children superior advantages of education, and is still an active business man, also a well read man, possessing a large knowledge of men and things derived from personal observation. I do not know of a more complete triumph over adversity in early life than this man has achieved, and his worldly success has all come by farming.

Another instance now in mind, is that of a man who commenced farming with a poor farm of some 200 acres, paid for, but with considerable less than $2,000 capital besides his land, and who never possessed a sufficiently rugged constitution to do a full day's work in the field. By nice care of himself, aided by the naturally health-giving occupations and amusements of farming, he considerably strengthened a weak constitution and made it hold out to the ripe age of some seventy years. Though not able himself to perform the heavier kinds of labor and cultivation of the farm, yet he planned and directed it all, and with his own hands planted and trained up orchards of various kinds of fruit, and devised and executed various other improvements, ornamental or substantial. He raised an interesting and refined family, fitted them well for active life, added more than three-fold to the value of his real estate, besides leaving at his decease several thousand dollars of personal property invested at interest.

In speaking thus favorably of agriculture I do not wish to make an erroneous impression upon your friend "E." Every man has his own peculiar difficulties to contend with, and every business has its drawbacks. To be successful and contented and happy at farming, a man must have a natural and quite decided taste for it, and considerable enthusiasm in its pursuit. Perhaps there is no business whatever to which this remark applies with greater force. The farmer has to do continually with the great laws and works of nature, and his pursuit is certainly an intellectual one. Very interesting and important subjects of inquiry are continually presenting themselves to him, and to understand and solve them correctly, he must have a turn for and the habit of extended and minute personal observation, and of reading and reflection. These personal intellectual attainments are what make him truly a *practical* farmer, and enable him to generalize and to devise a system of cultivation and farm management adapted to his own farm, and to cut loose from mere traditions and customs of husbandry which so often prove an incubus upon farming, and have operated to bring the business into disrepute. Truly in farming, if in any pursuit,

"Mind makes the man, and want of it the fellow."

Whether or not it would be advisable for your correspondent to go to farming in Illinois, with 160 acres of land paid for and $2,000 of capital besides, I am unable to say, for want of a personal knowledge of that country. If he concludes to try farming there, I would say that success will come more by a natural taste and aptitude for the pursuit, and an ability to plan well, than by the mere physical labor of his hands. I know of no business where a little floating capital, to operate with, is more advantageous than in farming. It enables one to take advantage of the markets in buying and selling produce, stock, &c., at the best time, and to adapt his operations to the peculiarities of times and seasons. E. will do well to bear this in mind. If wheat is the principal crop in that section, raised by all, perhaps he could make more by cultivating to a considerable extent some other crops, not so commonly raised there, or by the rearing of nice stock, or by the purchase of store stock, for the purpose of fattening for the markets. Or if he makes wheat the leading crop, perhaps he can devise improvements upon the methods of tillage there commonly practiced, by which the yield and the profit of the crop shall be considerably greater than that commonly obtained. If drainage is needed, then its employment may increase the crop and profit. If the plowing and other tillage is shallow, superficial and hasty, perhaps much deeper and more particular and thorough culture would pay well at once. This is not an uncommon effect in other sections of the country. If the use of manure is erroneously discarded, perhaps attention to its manufacture, and a proper adaptation of it to the different soils or crops might prove profitable. We often hear of crops of wheat in England and Scotland that average from 50 to 60 bushels per acre, on land that has been tilled for centuries. Cannot the virgin soils of the west be profitably so tilled as to produce as large crops of wheat as these old soils? Land is valuable and profitable considerably in proportion to the excellence of the cultivation bestowed upon it. Success in farming comes more from a thorough system of culture and of farm-management, wisely adapted to one's case, than from natural richness of land. I advise your correspondent not to depend too much on the natural fertility of the land, and the cheap and superficial cultivation or working of the same, for a profit; but rather let him devise a system of sound, thorough culture, adapted to his land and markets, and in all paying ways aid the natural resources of his soil by the application of mind and science to his farming.

Thus, gentlemen, I have hastily complied with your request, and leave it for you to use as much or as little of what I have written as you may think best.

F. HOLBROOK.

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[For the Country Gentleman and Cultivator.]

Two Crops of Hay from the Seed the Same Season---Hay Caps.

Messrs. Editors—I had a piece of land of four acres, which had been in corn and potatoes on green-sward in 1859—manured heavily for the corn and potatoes. Three-fourths of the bulk of the manure was composed of swamp muck, was put on after plowing, and harrowed and cultivated into the soil. Soil fine sandy loam, made by the overflow of the water in early days. It has not been flowed for fifty years—was plowed in the fall of 1859. In the spring of 1860, it was thoroughly worked with a horse steel-tooth cultivator and fine harrow, sowed with half a bushel of clover, herds-grass and red top seed to the acre, and harrowed and rolled. The first week in July many of the clover and herds-grass heads were in blossom, and many spots had lodged. It was then mown, and cured (five good sunny days) mostly in the cock; then housed, producing six tons.

By the middle of September it was full in the blow—was again cut and cured, and produced seven tons, making 13 tons from four acres, worth here $16 per ton, or $52 per acre. Although the season here was extremely dry up to the middle of August, and one half ton to the acre was a good yield for our upland meadows, this spring-seeded piece did not seem to lack for moisture. I think it was from the freshness and recent thorough pulverization of the soil in part, although always an extra piece for meadow. The prospect for future crops of hay from this piece, is better than on any piece seeded with a grain crop.

I have often cut large crops of hay seeded in the spring on green sward once plowed, at one mowing about the 1st of Sept., when at the 1st of July they had but little growth on land as good as this; and am convinced that the early maturity of this first crop was mostly owing to the thorough and deep pulverization of the soil.

One word in favor of hay caps. I had thirty made the commencement of haying, of common yard-wide sheeting, four yards in a cap. A smaller size will answer as well in most cases. The cloth had nothing put on to turn water, yet I never could discover any wetting through into the hay, and have carted many a load that had been cap-covered through a rain without opening. Mine were out in the fields most of the time for ten weeks, where there were plenty of grasshoppers, and I think they have not eaten them at all. I assure hay-makers that hay caps are a thing that will pay. H. W. Lester. *Rutland, Vt.*

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[For the Country Gentleman and Cultivator.]

The Garnet Chili and Prince Albert Potatoes.

The Garnet Chili potato has done well with me the past season. The yield was satisfactory, tubers generally large, and the fewest small ones of any crop I ever raised. The quality was very good, though we do not consider them as good as Prince Alberts. From the roughness and thickness of the skin, I would suppose that they would be exempt from the rot. This, in addition to their other merits, should cause their general introduction, and thorough trial.

Prince Alberts, planted the same day with the Garnets, in same field—soil and culture similar in every respect—yielded about one-third more—an excellent crop; the bulk of them medium to very large, with a considerable number of small ones. After two years trial with this variety, I am highly pleased with it, both in regard to its productiveness and quality. We greatly prefer them to the Mercers for table use, while the yield is nearly double that of the latter, and they have not yet shown any symptoms of the rot, though all sorts that I planted this year, excepting Garnets and Prince Alberts, were badly diseased.

It has occurred to me that varieties might be selected for planting in localities where the disease is most frequent, that would escape its ravages. If there is any variety that is proof against the rot, and at the same time a good table potato, its universal culture would add immensely to the wealth of the country, as well as to the comfort of all classes.

From my limited experience, as well as the testimony of numerous parties in other localities, I should expect more from the Garnet Chili in this respect, than any other that I have seen. E. Y. Teas. *Richmond, Ind.*

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[For the Country Gentleman and Cultivator.]

WILLOW HEDGES.

L. Tucker & Son—Having received several letters, asking me to state through your paper how I grow my Osier willow hedge, and why I prefer it for a farm fence, I avail myself of a little leisure to reply. I set the cuttings in a single row, by pushing them into well prepared soil, about eight inches deep and six inches apart in the row, and hoe them twice the first year. They will make a growth of four to six feet the first season. Care should be taken to push the cuttings the right end up, and that every cutting be of good size and fresh, as every cutting should grow, so that there be no breaks in the fence, for they are not easily filled when once made.

The second spring cut all off close to the ground, and you may expect a hedge at the close of the growing season as thick and tall as the one shown in the Country Gent. of Jan. 17th, which I have trimmed and formed into a fence as follows: Stretch a line at three feet from the surface, through the center of the hedge, and cut off the willows that touch the line. This gives a straight row of equal height, which are used as standards, through which the long willows left uncut on each side of the line are interlaced, finishing up by a sort of rope-like binding at the top of the cut standards the entire length of the hedge, forming a stout rope of live willow, near two inches in diameter, held in place by live stakes which no freshet or overflow will be able to move from its foundation.

I prefer the willow for hedging, first, because it is of easy culture and rapid growth. It readily furnishes the material for other hedges, bands, withes, ox whips and baskets—the annual trimmings giving a profit. It is so intensely bitter, that mice and rabbits will not gnaw the bark. This cannot be said of the thorn or Osage Orange, which I am told by Illinois farmers, is much injured in their State, by field mice. The roots of the willow will not sprout when cut with a plow. It will make a tight, durable and paying fence, sooner than any plant or shrub with which I am acquainted, and at a trifling cost. It is perfectly hardy, and is not injured by heat or the severest freezing. Its foliage is the last to yield to the saddening influence of early winter, and its graceful rods wave before the wind as prettily as an ostrich feather in a lady's hat. D. L. Halsey. *Victory, N. Y., Feb.* 20, 1861.

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It is dangerous for one to climb his family-tree too high, for he is very apt to get among dead and decayed branches.

[For the Country Gentleman and Cultivator.]

Farming as Compared with Other Pursuits.

Messrs. Editors—I perceive your friend E. received quite a damper upon his farming prospects, in a letter from Wisconsin, published in the Country Gentleman of Feb. 14, page 106, in which the occupation of farming is held in very low estimation, lower than the "mechanic, the clerk, or the day laborer;" and again, "the most laborious and least profitable of almost any branch of labor." The writer of that letter says he speaks from what he has seen and known; of course he ought to know, but he confines his remarks to those "who have been brought up and educated to other means of a living," than "to that most slavish of all lives," the farmer.

Now all this may be true in Wisconsin, applied to those who know nothing about farming, and who enter upon the business as a mere recreation, a pleasure and a pastime. Such men can scarcely make money in the business any where—much less in a new country where labor is high and produce low. A man must understand his business to be successful in it. I was bred a farmer, and pass for a good one; have succeeded in it; but should I quit it, and go to preaching or merchandising, it would without doubt be a failure.

As a general rule, a man will succeed best in the business he has been trained and educated to. "Practice makes perfect," is an old adage and a true one. But I would recommend to your friend E., as he really seems to desire information upon the subject, not to take too much stock in those random assertions, "the most slavish of all lives"—"the life of the mechanic, the clerk or the day-laboring man is above and preferable to it—of necessity lives a hard life," etc. Of course I do not profess to know what the farmers' lives and prospects are in Wisconsin, but they cannot be so deplorable in all cases, as represented by the author of that letter, for there are scores and hundreds there, emigrants from New-Hampshire and Vermont, who have grown rich by the enhanced value and cultivation of their lands.

Your inquirer E., says he has a "decided proclivity to farm pursuits," and has endeavored to learn and inform himself as to its management and detail in past years—has a good education, is aware of the toil, diligence and watchful attention necessary to success, and writes like a man that has a taste for rural life, with energy and perseverance to carry it out, with 160 acres of good land and $2000—over and above. Thus circumstanced, with a reasonable share of prudence and economy, I can hardly conceive of a failure. Certainly not here in Vermont. With a farm of that area on our hills or in our valleys, with the loose capital spoken of, he need not make himself, his wife or children slaves, nor lead an irksome, unpleasant life. Care, attention, economy, would be necessary; and so it is in all other business, if we expect success. The hazard is less by far, than in many other branches. The returns are sure, and will be, so long as seed time and harvest continue. Panics may depress and injure, but they cannot ruin and destroy us.

Were I to undertake to enumerate the instances within my knowledge, of successful farmers, who began with much less means than E. has at his command—some with nothing at all—and who are now men of wealth, possessing, in addition to their farms, bonds, mortgages and bank stock, it would be a hopeless task; their names are legion. Were I to seek out and count the rich "mechanics, the clerks, the day-laboring men," *whose lives are so much preferable to the farmer*, the task would be easy; they are few and far between. I say then to your earnest inquirer, "go ahead!" Be not disheartened by the croakings or the dark picture drawn by your Wisconsin friend, and when you put your hand to the plow do not look back; you have the material, the means for success. If you are only true to yourself, success awaits you. You can adorn and beautify your prairie home, and when you have done with it, you have something permanent and real to leave to the inheritance of the loved ones that come after, whose paternal acres may be held as a sacred trust for after generations.

Three years ago I listened to an address at an Agricultural Fair, in which the speaker chose for his theme, "farming as compared with other pursuits." He began with himself; he was a printer by trade, though bred to the farm in early life. He looked upon boys behind counters, in bookstores and printing offices, with envy, and was most happy to escape from the farm to learn a gentleman's trade. He had never been able to get higher than journeyman and job-work, and had just kept his head above water, as he expressed it, and support a small family, by close application, and working more days in a year, and more hours in a day, than any farmer he ever knew. He was then on the down-hill of life, and very feelingly expressed his regret that he had ever left the farm, for he sincerely believed that pecuniarily he might have been far better off to have followed his early pursuit, and that his declining years would have been much happier. He then adverted to the careers of fourteen of his relatives, brothers, cousins, uncles, brothers-in-law, &c., all of whom were bred in early life to the farm; but five only had adhered to their first calling; three of them were rich, and two in moderate comfortable circumstances. Of the nine that had abandoned the farm for something more fascinating and desirable, trades, merchandizing and professions, five had made a precarious and scanty living, two were wretchedly poor—had been on charity—two others possessed a small property, about equal to the two farmers who had the least property. This he gave us as a truthful picture; he had the means of knowing. I had no doubt of its accuracy. And so we should find it throughout our country, could we obtain the true statistics of these things.

At the West, in all new countries, farming is not as profitable as in the older regions. There labor is scarce and high; everything that a farmer must purchase is dear; his produce, being more remote from the seaboard, is lower—lower in proportion to the distance and cost of transportation to market. But his lands are cheap and productive; time, patience, energy and perseverance will bring him up to competency and independence. Let him hold on with a good heart and a stout arm, through the incipient stages which all new countries must pass, and when roads, mills, school houses and churches are built, and the inhabitants begin to swarm as bees from a hive, and the rise of land of itself will go far to make him rich.

In New-England, out of the large towns and cities, as a class, no other branch of business in the aggregate pays so well as farming. I presume it is so in New-York, and in all the old settled States. Here and there is a case in the professions, in merchandizing, in manufacturing, among the mechanical trades, where fortunes are made, and individuals of great wealth stand out prominently before the multitude, attracting thousands to try and do likewise; but take the whole gains of these diversified pursuits for the last ten years, compare them with the whole gains of the farming interest, (I mean the nett gains only,) in proportion to numbers engaged in each, and on which side would the balance show? I may be mistaken, but in my humble judgment the result would be largely in favor of the farming interest, much as it is depreciated, much as it is shunned and dreaded. J. W. Colburn.

Springfield, Vt., Feb. 19, 1861.

[For the Country Gentleman and Cultivator.]

CRANBERRY CULTURE.

I noticed in the Country Gentleman of Feb. 21st, an inquiry in regard to the adaptation of a plot of ground for cranberry culture, and an intimation to some of your readers, familiar with the subject, to answer the inquiry. Not having noticed a reply to the question proposed, I will endeavor briefly to impart the desired information. Your correspondent states that he has "about three-quarters of an acre of flat, swampy land, producing nothing but coarse swamp grass, and which is overflowed at every wet spell of weather," and makes the inquiry, "would it not be a good place for cranberries, and if so, when and how should they be planted?"

In answering the inquiry, I would say, from the description given of the plot, it seems very well adapted to cranberry culture, and with proper preparation would doubtless produce liberal crops of this estimable fruit. I infer that his meadow can be drained. This, then, would be the first operation, and one somewhat essential to his future success. As soon as it is sufficiently drained to admit of working, burn over the surface to clear it of the coarse meadow grass, and if sufficiently dry, plow it as for any other crop, and plant out the vines as hereafter described. If it remains still too wet to plow, the removal of the entire surface, with the grass, roots, &c., to the depth of three or four inches, will answer the same purpose. The portion removed will be worth the cost, for the barn-yard or compost heap. The plot may then be planted with the vines in rows about 30 inches apart, and as near together in the row as the quantity of plants to be used will allow; the nearer the better, as they will much sooner become *matted* or cover the entire plot. They may be set any distance, from six inches to two feet, and in time (three or four years,) at two feet apart they will cover the ground; but it is desirable to have them *mat* soon, and for this purpose they should be planted nearer. Twelve or fourteen inches may be considered the best distance for ordinary planting.

The plants should be well rooted, bearing vines, of some cultivated variety, (the "Cape Cod Cherry" is the best,) and the roots covered at least to the depth of two and a half to three inches. If the soil is of a clay or peat, the surface should be covered to the depth of two or three inches with *sand*, to prevent its baking, which would be likely to destroy the young plants. After the vines become rooted they will require cultivation with the hoe the same as ordinary field or garden crops, until the ground becomes overspread by the vines, but after that no more care is needed. A plot planted in this way with the Cherry variety, will generally produce a small crop the second year, and the third season yield, under favorable circumstances, about one hundred and fifty bushels to the acre. A friend of the writer obtained last fall three bushels of very fine fruit, from a plot of two square rods of ground, it being only the third year from planting.

The best time for planting the vines is the spring. From the middle of April to the first or middle of June will answer very well in the Northern or Middle States.* Fall planting at the north, unless the ground can be flowed, which is always desirable, sometimes proves a failure from the plants being thrown out by the frost during the winter.

If your correspondent can conveniently flow his grounds by erecting a cheap dam, and shutting on the water during the winter months, it will be desirable, yet not essentially important. WM. H. STARR,

East New-London Nurseries, New-London. Conn.

[For the Country Gentleman and Cultivator.]

Valuable Suggestions about Manures.

MESSRS. L. TUCKER & SON—A few thoughts upon the subject of manures have suggested themselves to my mind, by reading some of the late nos. of CO. GENTLEMAN. It is a subject of vast importance to us New-England farmers, and is worthy of much more attention than it receives. If every farmer would give his attention to saving all the manure that can be saved upon his premises, thousands upon thousands of dollars would be saved to the country every year, and many farmers would be saved from bankruptcy beside, and instead of barren and sterile fields which we see in passing over the country, we should see fruitful fields, yielding an abundant harvest.

The more hay and grain the farmer can raise, the more manure he can make, if it is all fed out, and the straw used for bedding in the winter management of his stock, as it should be. The farmer who sells his straw and hay, robs his farm, and consequently robs himself.

A remark of Mr. JOHN JOHNSTON'S, made in the CO. GENT. a few years since, I have not forgotten. He says—"I have always had money enough in my pocket, when I have fattened stock for the market"—that is, by purchasing stock judiciously, and feeding out his hay, grain, &c. judiciously, he has realized a good profit and a good large pile of manure, which, as the Hon. JOSIAH QUINCY, Jr., has said, (in one of the Legislative Ag. meetings in Boston,) is the most profitable crop he raises.

Manure of stables, thrown out to the weather, is covered with snow frequently; therefore the pile is a layer of snow and a layer of manure, and not only one layer of each, but a great many; and when the pile thaws in the spring, a large portion of the soluble part of the manure is carried away by the water. A temporary shed over the manure heap in the above case, would be good economy. If stock have a good bed of straw, the manure heap is increased in quantity and quality, especially if it is to be plowed in for the corn crop in the spring. A quantity of muck or loam, to the depth of one foot or more, should be placed under the stable floor, to absorb the urine, unless a tank is used to catch it. I have found by experience that muck or loam, lying under a stable for one year, is a very rich manure for grass lands.

Much has been written of late, in regard to composting night soil. My privy is over a vault 6 by 8 feet and 6 feet deep, laid with stone and brick, and plastered with cement—therefore it is water tight. Muck or loam is added to the night soil, from time to time, with plaster, which thoroughly absorbs the ammonia. Dead rats, mice, chicken heads, legs, &c., cats, woodchucks, hair, bristles, old rags, hen manure, urine, and various other things, are thrown into this vault to make up the compost. Ashes or lime mixed with it, would release the ammonia and thereby injure the quality.

By the above process, I make four cart loads of 30 bushels each, of an exceedingly rich manure, far richer than any barn-yard manure I can make. It should be carted into a heap in the spring and shoveled over two or three times before used.

Long or green manure, at the rate of fifteen cart loads, spread broadcast on a clay loam, or heavy loam soil, with 100 bls. plaster plowed in, will give a good crop of corn if about a pint of the above compost is put in each hill, and it is kept clean by cultivator and hoe, provided the elements are favorable. Thoroughly decomposed manure is much better for light loam or sandy soils.

Deerfield, Mass. JAMES CHILDS.

A Cheap Corn Sheller.

Not feeling able to buy a corn sheller, and not willing to borrow, I have hit upon a method of shelling corn, which, though simple, was entirely new to me. One bushel can easily be shelled with it in fifteen minutes by a single person. As it is simple, convenient, and cheap, I venture a description.

Take a common barrel with only one head, which should be strong; bore the head with a three quarter augur making the holes as near together as possible and not weaken the head; pour into the barrel half a bushel of ears, and set it upon a half bushel; then take an axe and commence pounding the ears. The corn will drop through the holes and leave the cobs in the barrel. A. S. R. *Kirtland, O.*

Vitality of Eggs.

It is a matter of some consequence to determine how much cold, eggs will endure without losing their vitality. About a month since, I had a few eggs of Seabright Bantam fowls, which I was keeping for the purpose of setting a hen for early chickens. These eggs were kept in a place where water froze so hard in a small vessel that it was somewhat difficult to break it, and I was apprehensive that the eggs would be so injured by the cold that they would not produce chickens. I tried them, however, and the result is a fine, healthy brood of chickens. G. B. H.

[For the Country Gentleman and Cultivator.]

How to Steam and Feed Cut Straw.

I have remarked a number of correspondences in your most valuable Co. Gent., respecting the feeding of cut straw to stock; but those who recommend it, as well as feed, do not give their system of feeding, which is the most desirable information that is wanted. As I have had some experience in feeding cut straw to my stock, as well as having tried several ways to feed it with economy, which is a great point of farming, and my being being a great admirer of fat, slick, clean and profitable cattle, I will give you the way I coax my stock to eat the cut straw, which is of wheat, oats, buckwheat and pea straw.

I have a small building adjoining the stable, with a a ground floor, and a door that opens just opposite the cattle in said building. I have an agricultural furnace, the boiler of which holds about forty-five gallons water, into which I put say about thirty-five gallons, to leave room for boiling, into which I put one oil-cake, about 8 pounds weight, the oil-cake being well bruised and stirred into the boiling water. Every care must be taken in attending the boiler after putting in the oil-cake, otherwise it will all be lost, the oil-cake causing the water to boil up—keep stirring it for about five minutes, when it will be ready to pour over the cut straw, which I have in a box close to the boiler—said box made of inch boards, tight, and five feet long by three wide, and two feet high, to hold the thirty-five gallons. I have fifteen bushels of cut straw in the box—the contents are poured over the whole, and well stirred up; then covered with a tight cover, and allowed to remain until the following day. It is then given to the cattle in quantities, according to the age and size.

Part of my stock are Short-Horns. The quantity I give them, and the hay I feed, is as follows:—three buckets of the straw is given to each cow in the morning at 10 o'clock, and half a gallon of dry ground oats at 12 o'clock—half a bushel of raw cut turnips at 4 o'clock, p. m.—one bucket of cut straw, and at night eight to ten pounds of wheat or oat straw uncut. My object in giving the cattle straw at night, is to add variety to their feed, as cattle cannot have too much variety, and especially where we have to feed them seven months before they can live on grass. At 8 o'clock p. m. my man cleans out all the mangers of the straw that remains after the cattle have eaten, and picked out the best—about half remains, which is used for their bedding, and I generally keep one foot and a half to two feet of straw under them, and remove their manure only once a week. Several times a day fresh straw is placed over what is wet and soiled, which is trodden down and compressed, and the urine all absorbed by the straw. It makes the best of manure and no waste, and the cattle keep clean. I use slacked lime, sprinkled over the floor every morning, which is a most excellent addition to the manure, and gives a good dry floor, as it absorbs all the damp and wet.

I wish to mention that the cows giving milk, are allowed one bucket of lukewarm water with one quart of ground oats scalded in same extra.

My stock on said food, look well; they have fine sleek coats, and are in good thriving condition. They are carded or curried every morning. I don't allow one particle of dirt on them in any shape. Water is kept constantly before them—stables kept clean, and they are regularly fed. One man's time is completely taken up in boiling food, cleaning, feeding, and caring for fourteen head of cattle, seven horses, and three calves. I forgot to mention that one half pint of salt is put in the water along with the oil cake.

Farmers who wish to have all their cattle very fat, can enrich the straw by adding provender and more oil cake.

I have not fed any hay as yet to my stock. I am keeping it for spring feed, as I find in this part, cattle don't feed so well in March and April as in the winter months, and require the best food to be given them last, when they will come out to grass with profit to the owner.

With reference to steaming food, about which I see inquiries—scalding the straw as I do, and covering over with a cover, it is in every way steamed and as well cooked as can be required. The buckets I mentioned are the common American, holding about four gallons.

Any further inquiries by your correspondents I will be happy to answer.

A furnace of the dimensions of the one I use, can cook food for twenty-five head of cattle.

All the chaff of the farm I scald also in the same way, only I mix it with boiled turnips three times a week, salting the turnips. Charles Hughes.

Aspen Grove, Three Rivers, C. E.

Reducing Bones to Powder.

A great obstacle to the use of bones as a fertilizer arises from the difficulty of reducing them to a condition in which they are readily applied and rendered immediately available to the plant. Bone mills are costly and require considerable power, and oil of vitriol or other chemicals are not always accessible to the farmer. The following process necessitates neither of these alternatives, and calls for no money outlay, except it be for labor. It is said to have been first communicated to the agricultural public of England by Mr. Pusey, and Prof. S. W. Johnson of the Yale Analytical Laboratory, has published it here, for the benefit of our farmers who do not quite know how to use their bones:—

The process depends upon the fact that bones consist, to the amount of one-third their weight, of cartilage or animal matter, which, under the influence of warmth or moisture, readily decomposes (ferments or decays) and loses its texture, so that the bones fall to dust. From the closeness and solidity of the bony structure, decay is excited and maintained with some difficulty. A single bone or a heap of bones, never decay alone, but dry and harden on exposure. If, however, bones in quantity be brought into close contact with some easily fermentable, moist substance, but little time elapses before a rapid decay sets in.

So, too, if fresh crushed bones are mixed with sand soil, or any powdery matter that fills up the spaces between the fragments of the bone and makes the heap compact, and then are moistened with pure water, the same result takes place in warm weather, though more slowly. The practical process may be as follows:—The bones, if whole, should be broken up as far as convenient by a single sledge hammer and made into alternate layers of sand, loam, saw-dust, leached ashes, coal ashes, or swamp muck, using just enough of any one of these materials to fill compactly the cavities among the bones, but hardly more. Begin with a thick layer of earth or muck, and as the pile is raised, pour on stale urine or dung-heap liquor enough to moisten the whole mass thoroughly, and finally cover a foot thick with soil or muck.

In warm weather the decomposition goes on at once, and in from two to six or more weeks the bones will have entirely or nearly disappeared. If the fermentation should spend itself without reducing the bones sufficiently, the heap may be overhauled and built up again, moistening with liquid manure and covering as before. By thrusting a pole or bar into the heap, the progress of decomposition may be traced from the heat and odor evolved. Should the heap become heated to the surface, so that the ammonia escapes, as may be judged by the smell, it may be covered still more thickly with earth or muck. The larger the heap the finer the bones, and the more stale urine or dung-liquor they have been made to absorb, the more rapid and complete will be the disintegration. In these heaps, horse dung or other manure may replace the ashes, etc.; but earth or muck should be used to cover the heap.

This bone compost contains the phosphates of lime in a finely divided state, and the nitrogen of the cartilage which has mostly passed into ammonia or nitrates, is retained perfectly by the absorbent earth or muck. When carefully prepared, this manure is adapted to be delivered from a drill-machine with seeds, and, according to English farmers, fully replaces in nearly every case the superphosphate made by the help of oil of vitriol.

[For the Cultivator and Country Gentleman.]

BUTTER-DAIRYING IN CHENANGO CO.

L. H. Tucker, Esq.—While visiting our section of the State some few weeks since, you expressed a desire to learn what the best dairies yielded per cow, in amount of proceeds and number of pounds. As this has now become one of the most noted dairy regions of the State, I take the liberty to enclose you a statement of the proceeds of the farm and dairy of Mr. Albert Yale, one of the members of our "Farmers' Club," (the Bainbridge Farmers-Club,) before which we had the great pleasure of hearing you lecture. It it drawn up hurriedly, from notes taken at the time he made the communication to the Club, and from a conversation with him after. Mr. Yale is a young man, but one of the most thorough and energetic farmers we have. His farm is upland, lying in the town of Guilford, about five miles from the Susquehanna river, upon west side, sloping gradually to the south and east, and also towards the river. The wood on part was maple and beech, part pine and chestnut. He thinks the latter preferable for grass land.

His statements and experiments, as furnished to our Club, upon different subjects, have been very interesting, and the same may be said of others of the members—all have endeavored to make each social gathering entertaining, and at the same time profitable to themselves. With but one exception, we have met every Saturday evening, with a full house, since Saturday the 24th of Nov., at which time we organized anew for the winter of 1861.

If Mr. Shattuck, whose dairy statement you published Feb. 7th in Co. Gent., will not take it amiss, I would say that the difference in the prices per pound received by Mr. Shattuck and Mr. Yale, is accounted for as follows: Mr. Shattuck's butter was sold upon a contract made the spring previous, and Mr. Yale sold his butter at the low market prices of last fall. I would say, however, that such dairies as these furnish a yield above the average. I wish you could furnish dairy statements from other portions of the State. J. J. *Bainbridge, N. Y., Feb.* 10.

STATEMENT OF THE PROCEEDS OF THE DAIRY OF ALBERT YALE OF GUILFORD, CHENANGO CO., N. Y., FOR 1860.

My farm contains 64 acres—56 acres under improvement—balance woodland. I planted one acre of potatoes, one acre of corn, raised 500 bush. oats, kept three horses, ten sheep, and ten cows. That the pasture was good, one may judge from the amount of butter yielded by the cows. I have hay enough now in my barns to bring them to grass again in fine condition. I winter but two of the horses—sold one last fall. On my pastures and meadows I have sown this season 3,000 lbs. plaster and 25 bushels lime. I slack my own lime. In the process of slacking, I mix plaster with it. This mixture I sow upon my wet land, and find a marked difference from the result of either sown separate. I sow plaster alone upon the drier portions of my farm.

I feed my cows all the hay they will eat from commencement of "foddering." Cut my hay very early. My haying is nearly finished by the time the average of farmers commence. I commence feeding meal the 1st day of February, one pint a day each, and increase it up to two quarts per cow. After calving, I increase the feed to two quarts per cow twice a day. I do not turn to grass until it is good feed, and in changing them from hay and grain, turn out to pasture the first day about an hour only —the next day leave them a little longer, and so on for about two weeks, all the time decreasing the amount of meal.

I salt my cows in wet weather in summer, every morning, about one pint to the ten cows. In dry weather, salt three times a week. In this matter of salting, I have experimented a good deal, and am satisfied if I vary from the above practice, I am a loser to a certain amount.

During the winter I keep my cows in the stables most of the time. The ages of my cows are as follows:—Five are six years old, three are five years old, and two are four years old.

Amount of butter sold, 2,300 lbs., at 23 cts. per lb.,		$529.00
Do. do. used in family, 250 lbs., at 23 cts. per lb.,		57.50
Four deacon skins, sold at 75 cts. each,		3.00
Two hogs, weight 696 lbs., at 7 cts.,		48.72
Six calves, fed on skimmed milk, sold for		31.00
		$669.22
Deduct purchase of two shoats in spring,	$9.00	
Do. corn, fed hogs, 10 bushels, at 75 cts. per bushel,	7.50	
		16.50
		$652.72

Making the average to each cow, $65.27—number of lbs. to each cow, 255.

My cows commenced dropping their calves Feb. 28th—the last calved April 20th, and were milked until about the 1st of Jan. following. The kind of meal used is rye and oats, equal parts, ground together. For two years I tried corn (without cob) ground with oats. Like the rye and oats better. It takes the cows in spring about two weeks longer to get in same flesh as upon the rye and oats. I raise no rye on my farm, but exchanged oats for rye, &c.

ALBERT YALE.

[For the Country Gentleman and Cultivator.]

PROFITS OF POULTRY KEEPING.

I send you herewith a statement of an experiment with fowls made to the Committee of our Agricultural Society in Sept. last, to which was awarded the premium. Although the results were not in any way "alarming," yet they compare favorably with similar statements in point, and show conclusively that fowls can be made *quite profitable stock.*

Statement.—Account commenced Jan. 1, 1860, and continued six months. Stock, 30 hens and two crowers; the Bolton Grey blood predominating with strains of Black Spanish, Plymouth Rock, Chittagong, Dominique and China, (I find mixed breeds do better than pure bloods.)

They commenced laying soon after the 1st of the month. The largest yield of eggs in any one month was in Feb., 40 doz. I see no reason to change my opinion as set forth in my statement of two years ago, that it is more profitable at present prices to raise eggs than chickens, therefore I set only enough hens to make sure of a choice lot of young fowls, as I consider a hen in her prime at 2 years, and decreasing in value, for laying purposes, after that. I send to market all but one or two of the best crowers, and all of the inferior pullets, during July and August, finding it more profitable to work them off then than to feed till fall.

You will observe that the quantity of grain consumed is large for the number of fowls. This is owing to their being confined almost entirely to a house of 10 by 20 feet, and a yard of 8 by 12 feet. I am safe in saying I should have used one-eighth less grain, and had 30 dozen more eggs, if the fowls had had a free run.

I have underestimated the manure, which I find quite a valuable article. My method is to spread under the roosts every two or three weeks, a few shovelfuls of loam, or better still, *chip dirt*, and what with the scratching of the fowls and an occasional working over with the hoe, I have in the spring a homogeneous mass of excellent fertilizing material.

The plan of *feeding* I have finally adopted is to keep corn by them all the time, giving, for variety, a feed once or twice a week of oats, or potatoes boiled and mashed with meal. For animal food, which they *must have*, I keep them supplied with scraps chopped fine, or fresh meat, and furnish them with lime in pounded oystershells.

For *fattening* I know of nothing better than good sound corn, with milk, either sweet or sour, to drink.

Dr.

To 11½ bushels of corn at 92c.,	$10.58
2 do. oats at 55c.,	1.10
1¼ do. meal at 88c.,	1.10
Meat, $1.20; oystershells and pepper, 20c.,	1.40
10 gallons sour milk at 4c.,	40
1 hen bought, to replace one lost,	50
	$15.08

Cr.

By 152¾ dozen Eggs sold, averaging 18¼c.,	$27.89
20 do. used and set av. 18¼c.,	3.65
55 chickens on hand worth, average, 15c.,	8.25
6 months' manure,	3.00
	$42.79
	15.08
Profit of 30 hens for 6 months,	$27.71

Framingham, Mass. F. C. BROWN.

THE EVERLASTINGS.

(HELICHRYSUM.)

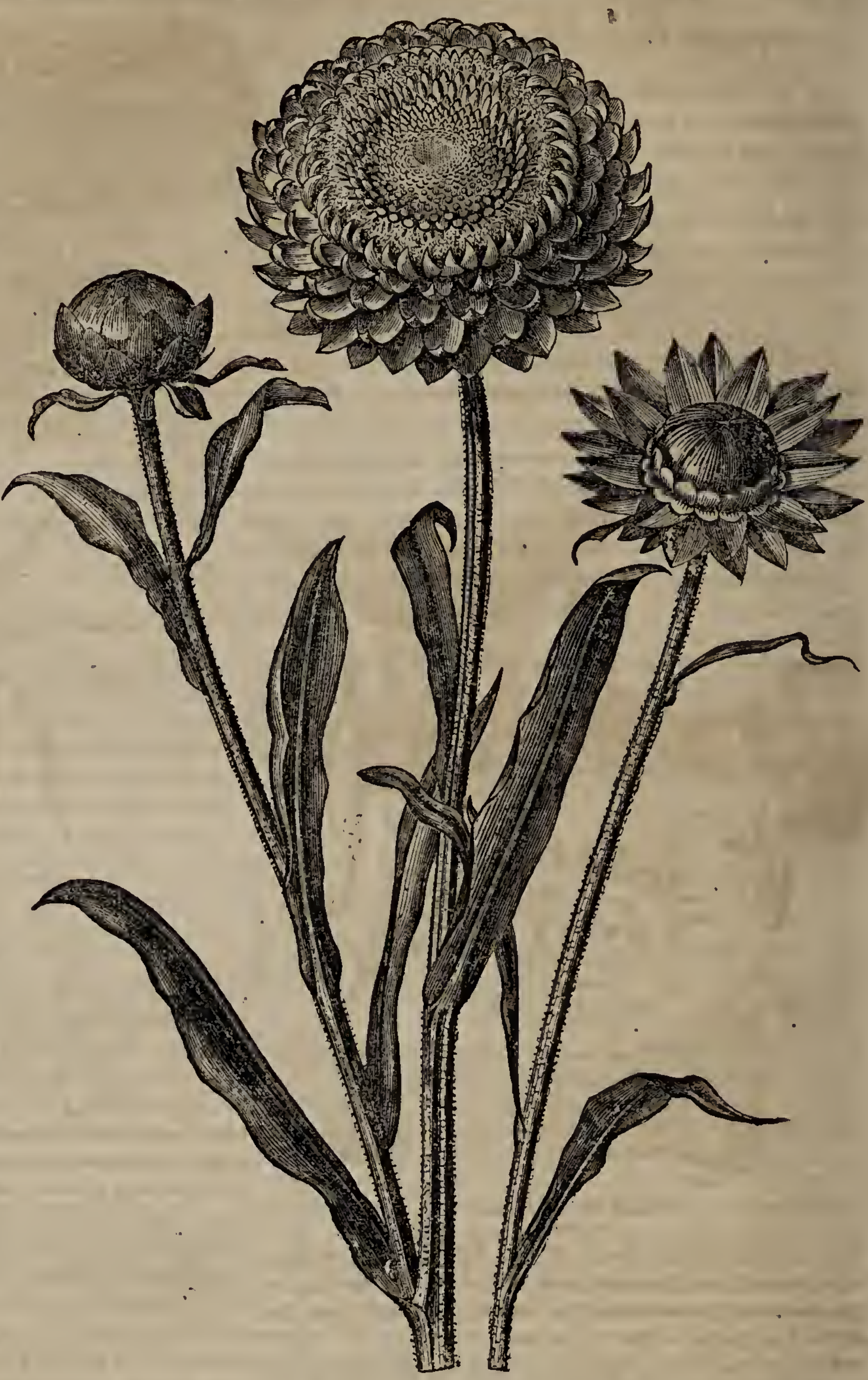
The name "Everlasting," is applied to this class of plants because the flowers retain their form and color for a long time in a dried state.

The small yellow one so much used in France and the European countries for wreaths to be placed on graves and tombstones, is the *H. orientale* or *Gnaphalium orientale.* Several shrubby and perennial species are cultivated in green-houses, and are exceedingly showy interesting plants when well grown, and in full bloom.

Our object at the present time, however, is to speak more particularly of the new large flowered annual varieties of the *H. bracteatum* and *macranthum.* These are yet, (Nov. 8, 1860,) in full bloom in the garden, bearing very slight traces of injury from several sharp frosts, and a long period of cold wet weather. The plants attain the height of three to four feet, and are stout and branching. The variety *Monstrosum*, here represented, is one of the best; the flowers, which are produced in great profusion, are about an inch and a half in diameter, and are white, yellow, red and yellow, orange, rose color, &c., &c.

Little need be said about the cultivation, as they are as easily grown and managed as a China Aster. Either sow in a hot bed with a mild bottom heat, about the 1st of April, and then transplant into the border in May, or sow in the open border at the usual time for planting hardy annuals.

These "Everlastings" are natives of Australia.

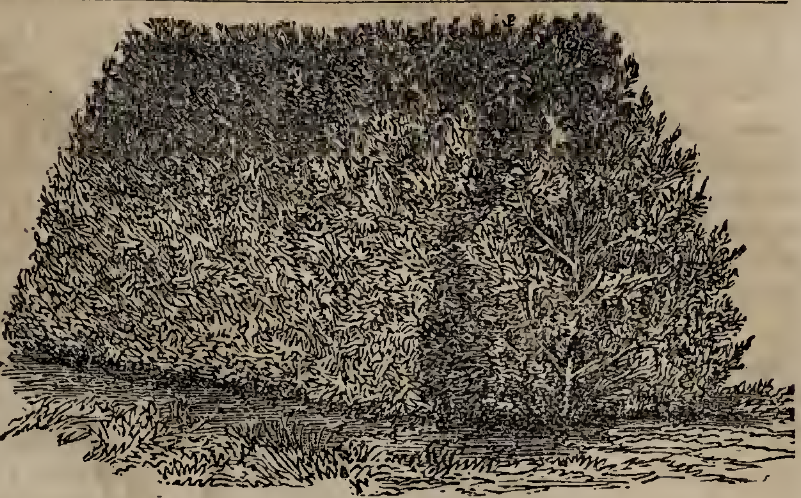


MANURE THE BEST CROP.

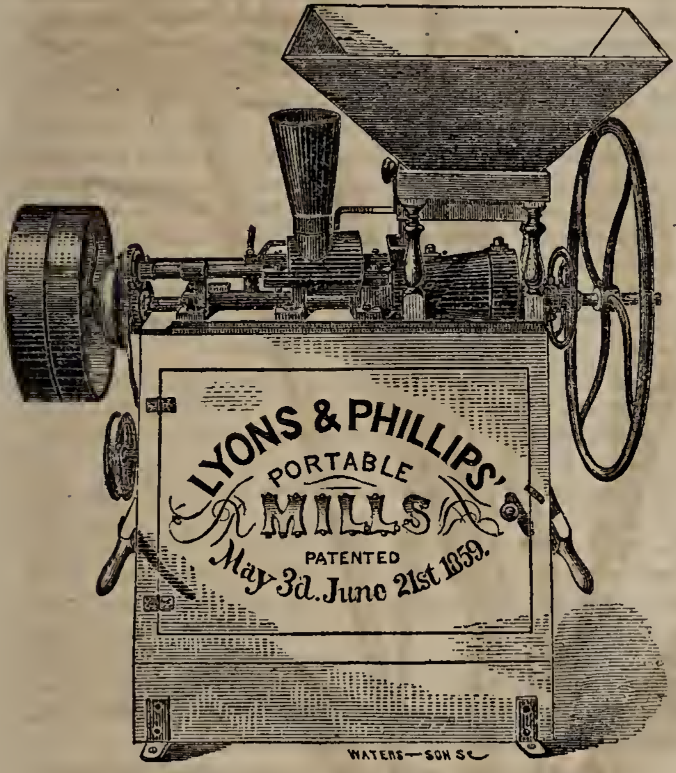
At a discussion by the Mass. Legislative Ag. Society, on "what kinds of farming are most profitable in the State?" the Hon. Josiah Quincy, Jr., of Norfolk Co., said (as reported in the N. E. Farmer,) that "the best crop he had found was manure. He raised 350 tons of hay, kept 80 cows, and followed Dana's method of mixing his manure with swamp muck, and by this means made 100 cords per month. The cotton seed and other meals which he feeds to his cows, make the manure exceedingly rich. He considered manure the most advantageous crop a farmer could raise, and it should be his first care. He believed in top-dressing, and spoke of McDougal's disinfectant which he was trying, and which he had found to nearly destroy the smell in his stables. If this proved successful in what was claimed for it, it would be of immense advantage in top-dressing, by holding the ammonia in the manure for the rain to disperse."

Dr. Loring of Salem, referring to this remark, said that "to a certain extent the most profitable crop was manure, but this depended somewhat on the manner in which it was applied after you have got it. He made his compost as Mr. Quincy did, and top-dressed his land, which was a heavy clayey soil. He thought that, if a farmer stocked his farm to its utmost capacity, while he thought that he was working for his cattle, his cattle were, in fact, working for him. The speaker said he principally devoted his farm to stock-raising and fatting stock. He also kept hogs, but he kept them on the starvation principle, using them for their work, which was valuable. He endeavored to carry on his farm at as little expense as possible; he did not cut his hay for feed, because his cattle had the machinery for cutting it themselves, and he further said that he thought that in the cut and wet state it furnished no additional nutriment." In this last remark, Dr. L. is far from agreeing with Mr. Tyler of Somerville, who said that "from his experience, he was satisfied the saving in cutting hay would more than pay the expense incurred, for fattening cattle," and Mr. Quincy entirely coincided with him.

American Arbor Vitæ Hedge.



The annexed engraving is an accurate drawing of a section of a screen, six years from setting, in the grounds of H. E. Hooker & Co., of Rochester, New-York, now about four and a half feet high, perfectly smooth and dense, and an object of admiration to every one. On the same grounds is another hedge about three feet high, set out three years ago last spring, in length about 800 feet, in which only three plants were lost of the entire planting, and even *these* have never been replaced.



FARM MILL.

Our correspondent, S. Edwards Todd, who has thoroughly tested this mill the past winter, writes that he is more than well pleased with it—that it is, in fact, just the mill for the farmer. Mr. T. says:

"I have just tested this mill; and here is the result. My power is a two-horse railway, and has been in active service for eleven years; and with the platform elevated nineteen and a half inches—just as it is for thrashing and sawing wood—I ground ten bushels per hour, of oats and buckwheat, fine enough for horse-feed, and seven bushels per hour, as fine as is desirable for cattle or pigs. Attaching the sieve, I ground a half bushel of Indian corn into fine meal, for family use, in five minutes. Last season I tested another mill exactly like this, which had a *bolt* attached for flour, and made as complete wheat flour as we are accustomed to get at flouring mills. A bolt *can* be attached to any of them.

"I then took the mill to a neighbor's barn, who has one of R. H. Pease's Excelsior two-horse railway powers, which runs like a top. His horses will weigh about ten hundred pounds each. With an elevation of 19 inches, and 356 revolutions per minute, he ground of oats and Indian corn, at the rate of ten bushels per hour. On his power, two horses will perform about as much as four usually do, on a sweep-power."

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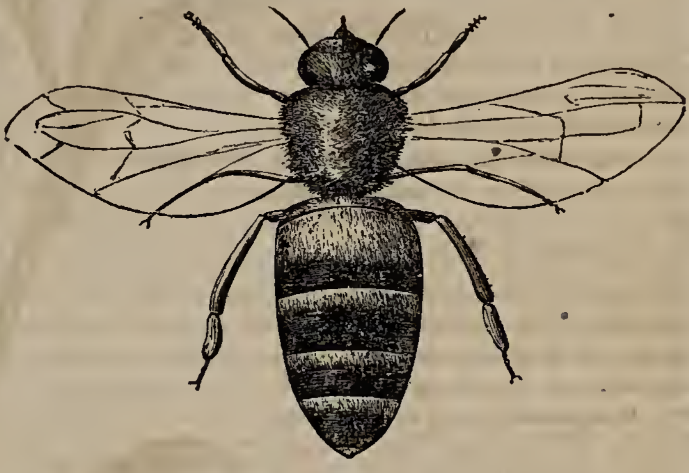
Great Crop of Spring Wheat.—A Montreal correspondent of the Genesee Farmer, says that a crop of Fife spring wheat sown on the 29th of last April, produced 49 bushels per acre.



[For the Country Gentleman and Cultivator.]

THE ITALIAN BEE.

The most desirable way to obtain a knowledge of any thing in animated nature, is by actual observation. This is not always practicable, but by faithful drawings the deficiency can, in a measure, be supplied. I have endeavored to do this in the above drawing of an Italian worker, much enlarged to show more clearly its peculiarities. The two upper abdominal rings are yellow in about the proportion given in the drawing, the unshaded part representing the yellow. Their wings are more deeply fringed with hair than the common bee. "The drones differ from the workers in having the *upper half* of their abdominal rings black, and the *lower half* an ochry yellow, thus causing the abdomen, when viewed from above, to appear annulated. The queen differs from the common kind chiefly in the greater brightness and brilliancy of her colors." The workers, drones and queens are a little larger than the common variety. They are milder in disposition. This is not a new fangled notion to advance their sale, for it was mentioned by high authority 1800 years ago. Their superior industry and quickness of motion was also observed at that early period. It has been widely circulated by advertisement in this country, that "*they will not sting*," which is false.

I will endeavor to sum up briefly: Greater industry—greater endurance—resist cold better. These qualities are most observable during the buckwheat harvest, and in autumn when fogs, chilly mornings, and high winds seriously interfere with the labors of the common bee. More inclined to rob, and their individual strength being greater, they generally succeed in attacking a common hive.

Italian queens are more prolific. The graceful shape and beautiful color of the worker causes almost every one on first sight to take an interest in them. It is thought by high authority, Dr. J. P. Kirtland, that they will "prove a valuable acquisition to localities of high latitude, and will be peculiarly adapted to the climate of Washington Territory, Oregon, and the mountainous regions of California." E. P.

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☞ A Bouquet of beautiful Flowers beautifully arranged, from the Greenhouses of our friend John Wilson, is acknowledged with thanks.

[For the Country Gentleman and Cultivator.]

Pork-Raising and Fattening in Burlington County, N. J.

Some of the farmers of a part of this county, have become somewhat noted for their enterprise, skill and success in raising, fatting and killing crops of very large and very fat hogs; and they have succeeded with a certainty of attaining such an average weight on their whole crop, at the usual age of 21 to 22 months, that, years ago, would have been thought rather fabulous.

Last year I collected and sent for publication, the account of weights of a few crops of pork, which elicited numerous inquiries from various parts of the United States, and to which I respectively responded.

This present winter (1860–1,) I have taken occasion to visit several of the farmers in this county, who raise, feed and kill such hogs, for the purpose of seeing again for myself, their stock, and learning directly from them, their mode of treatment, and see if there was any further information than I already possessed.

I. The Breed or Stock of Hogs.

In a general way there is no distinctive name or breed by which to designate the kinds in use. These farmers have for years selected, crossed, and recrossed, and almost every year crossed with their neighbors far and near, and with any kind of stock easily accessible to them, which each one, in his own estimation, thinks will best promote by that cross an improvement in his stock of hogs—bearing in mind, proper proportions, fattening propensities, and early maturity. Those noted for extra large hogs, consider extra size of especial importance, along with as many of the before mentioned qualities as can be embodied together. Consequently, they are of all colors, (excepting full black,) including white, sandy, red, brown, spotted, and mixed of all kinds.

Most feeders deem it more profitable and less troublesome, to keep a few more hogs in number, and not of so extra large a size, and not feed so much so early, and depend more upon late pasture and early coarse feed, and not keep them so late in the winter, when they require more care and attention after becoming so excessively fat and heavy. Others, including those who devote the most attention to this subject, and who are the most successful, as indeed they ought to be—and of this class the number is steadily increasing—prefer a larger kind of hogs, that will at 21 to 22 months old, well and carefully fed, average from 500 to 600 lbs. They cross through, and with an eye to increasing the size as much as it can be done without losing other valuable traits. Indeed it is difficult to breed hogs of from 600 to 700 lbs., nett dressed at that age, without their being more or less *coarse* and boney; and it is freely admitted that a hog with a large coarse bone will break down, after long and heavy feeding, sooner than one of good proportions and medium sized bone, though the latter will generally be fatter in proportion to his size.

II. Raising and Feeding.

The stock hogs are wintered over, with just sufficient feed of the coarsest and cheapest kind, generally unground, to keep them in good stock condition, they being provided with a dry and comfortable sleeping place, well littered, until the spring pasture is sufficiently grown, when the barrows and spayed sows are turned into a field of red clover, and with water, and have no other dependence until after harvest in July. The sows for pigs, being selected out from the others, likewise have clover pasture, and are provided with sheltered and separate places for their pigs, which are supplied with litter in advance, so as to become broken up, so that the young pigs can creep *over* it, which they cannot do over fresh long straw, and are thus liable to perish or become destroyed.

From the middle of April to 1st of May, is the most preferable time for the young pigs, on account of the condition of the pasture for the sows, and the cold weather being over. As a matter of course, the sows have to be assisted by a swill or slop of bran or ground rye, together with the waste of the house and dairy, as may be needful, and of this the little pigs will soon partake—when they are fed in an adjoining place, where they can creep and the old ones cannot get, until after harvest—when they are weaned, and the sows put with the other old hogs, and all of the old ones run in the stubble, which "starts" them. As soon as that begins to fail, they receive an assistance by way of a swill of bran or other coarse feed—first once, then twice a day. As corn becomes old enough, a little of it is cut up, and they will chew it stalks and all. Then a little early corn, if the feeder has any, together with any other coarse feed.

Next comes the offal of the crop of corn, (the worst of it first,) which is fed out to them from scaffolds out in those fields designed for next year's planting with corn, or from a farm wagon placed out there, and the place changed to equalize the manure over the field.

Next comes the good sound corn, fed on the cob, and they are placed in their yards and pens, and kept there. As the corn hardens, feed them once a day with corn meal —of old corn if on hand, if not, then shell a portion and grind it; but take especial care and pains that the grain which is then damp, does not heat and must in the bags before grinding—also that the meal be immediately spread out to cool and dry, or that will certainly damage, so early in the season. As they show a preference for the meal over the corn on the cob, feed them twice a day with meal, and finally three times a day, or all the time with meal, which is made moist or wet with water, a plentiful supply of which must be furnished them besides.

After they have been penned up, give them frequently free access to slacked lime or burnt oyster shells, wood-ashes, and charcoal, as they desire it. Some keep a pile of slacked lime by them.

They must have their pens kept well cleaned out, and a good, dry, roomy and comfortable shelter from the weather, and when very fat, well littered. Those who are most successful in fattening the heaviest hogs, have their houses open on the warm side, with shutters on the other sides, so as to ventilate it to suit the changes of temperature on warm days when the hogs are very fat, as no animal will take on flesh rapidly while it is in an uncomfortable state of bodily feeling, whether caused by great cold or great heat, or cold tempestuous storms.

Some farmers, and perhaps most or all of those who succeed in raising the heaviest hogs, as the season advances, scald the corn meal for them. In an adjoining place, a boiler is placed, and suitable receptacles near by for the meal. A large hogshead sawed in two at the bung, will make two tubs that will answer very well to scald the meal in. After the morning feeding, a new batch is prepared for noon; and after that is fed out, one for evening, and then another is prepared for morning, by boiling water being poured on to the meal and well stirred, and so much of it that after soaking, it will be just so thick and so thin that it can be scooped out by a pail and carried to the troughs, the hogs being also freely supplied with cold water.

I saw at one place, three tubs, in which, after the morning feeding is over, the three batches are made in immediate succession, and left to stand until the regular feeding three times a day. Hogs will eat and relish a mess slightly fermented, but they will instantly reject corn and meal that is the least *musty*, no animal being more fastidious in its taste, after its own way, than a high fed well fattened hog, and the person having them in charge, has need to be a judicious man, and very careful and attentive, to feed them just what they will eat with a good appetite without cloying or over-feeding them, noting that they will eat more in clear cold weather, than in warm muggy weather.

When kept very late and made very fat, frequently some of them have to be assisted in getting up to eat, and sometimes a *few* of the *coarse heavy boned* ones, may break down, or become lame and unable to walk. These have to be waited on where they are, or killed then, as the owner prefers.

These hogs, before killing, become so quiet, that the care-taker will walk all about among them as they lay down, without their minding him, and receive his assistance in raising up very kindly.

I do not know any feeder who systematically boils the feed for his hogs. Instances of its being so done, I knew years ago; but it was not continued, the additional labor and cost of fuel being too great. Now to return to

The Pigs just Weaned.

They do *best* to have an outlet on pasture, but sometimes have to be kept up to keep them out of mischief, and of course require more feeding to keep them in a *good* growing condition. Indeed, some persons, to avoid the damage by their little noses, keep them up in their pens *before* weaning, and turn the sows out to pasture, and let them in to the pigs three or four times a day. This plan is essential in some places, where the little pigs cannot be fenced against—as it will not do to put rings into their noses while sucking, before heavy feeding begins. The pigs are assorted in the fall—a suitable number of the best sows are selected for breeders—then the best of the others for wintering over—and the surplus, be that more or less, is then fatted to pig pork, out of which the domestic supply is taken.

The male pig is kept by *himself* until needed, after which he adds to the lot of barrows. Some prefer keeping him in his pen, and turning one in at a time to him, and out again immediately. Others turn him out with the sows, as in former times.

Weights of Hogs.

Having, as briefly as I could, given a detailed statement as repeatedly requested by letter to do, and trusting it may prove of advantage to some raisers and feeders of hogs in other parts, I will proceed to give the weights of a few crops of hogs, which were raised, fed and killed by the persons named below, in Jan. and Feb., 1861, being generally about 21 to 22 months old. They were sold to agents (residing among us) of New-York cutting and packing houses, and might have been seen piled up on pier No. 1, North river, New-York, along with a great quantity besides, of various sizes, but mostly of excellent quality, as they were unloaded there by the Camden & Amboy Transportation Company—early in the mornings of the 3d, 4th and 5th days of the week, from the middle of January to the middle of February—several hundred hogs being sometimes piled up there at once, awaiting to be assorted and delivered to the respective cutting houses, which also are well worthy of a visit by those who take an interest in such things.

We also have fed this winter, in this county, a few single hogs of enormously heavy weights, some of which are not yet slaughtered.

I.—28 by Isaac Harrison, near Jacobstown—639, 627, 606, 596, 580, 578, 576, 573, 565, 565, 553, 551, 549, 541, 540, 535, 514, 512, 500, 500, 491, 491, 478, 467, 466, 454, 449, 442. Seven of these averaged over 600 pounds nett, dressed. Twenty-three of them average over 550 pounds. The whole 28 hogs average 533½lbs—total 14,938 pounds.

II.—33 by Thomas Hood, near Shelltown—602, 594, 592, 590, 588, 584, 583, 576, 570, 569, 566, 562, 562, 556, 553, 553, 529, 525, 518, 516, 512, 508, 507, 506, 503, 503, 502, 500, 477, 460, 448, 439, 438. Twenty-six of these average over 550 pounds. The whole 33 average 532 pounds. Total 17,569 pounds.

III.—23 by Elwood Haines, near Jacksonville. This lot is of the Chester County (Pa.) breed, and are pure white, and very neat—620, 587, 567, 559, 550, 547, 536, 531, 530, 528, 523, 510, 505, 487, 477, 475, 475, 475, 472, 462, 457, 446, 432. Eleven of these average over 550 pounds. The whole 23 average 511 pounds. Total 11,753 pounds.

IV.—Charles G. Warner, near Shelltown—19 hogs—average 480 lbs.

V.—Thomas Rogers, near Shelltown—19 hogs—average 473 pounds.

VI.—George Bullock, near Jacobstown—28 hogs—average 473 lbs. (This crop was killed a few weeks earlier.)

VII.—Alexander Thomson and Joseph Johnson, both of Georgetown, each fed, and killed December, 1860, two pigs of the same litter—the former, at 7 months and 15 days old, weighed 286 and 336 pounds, and the later fourteen days afterwards, being 8 months less 1 day old, weighed 311 and 348 pounds, nett, dressed.

VIII.—25 by Isaiah Gooldy, near Mount Holly—626, 614, 608, 606, 598, 592, 572, 552, 548, 548, 542, 536, 530, 528, 528, 510, 508, 508, 488, 484, 482, 474, 472. Of these 7 average over 600 pounds—22 average over 550, and the whole 25 average about 542 pounds—total, 13,548. He also killed a few weeks previous 25 pigs, weighed 5,703 pounds, averaging 228 pounds.

IX.—Two hogs were killed in Burlington about the same time, weighing 716 and 660 pounds—besides other individual ones of large size. WATSON NEWBOLD.

Near Columbus, N. J., Feb. 27, 1861.

In addition to the above, we give the following from a letter from Mr. Joshua Pine of Gloucester Co., N. J.

X.—51 by Charles Clark of Pile's Grove, Salem County—615, 614, 598, 588, 576, 572, 572, 568, 566, 552, 552, 548, 540, 532, 516, 516, 516, 516, 512, 512, 512, 512, 504, 504, 504, 500, 496, 496, 493, 492, 492, 492, 484, 484, 484, 480, 476, 456, 456, 452, 448, 444, 440, 432, 420, 420, 412, 412, 404, 396—total, 26,010 pounds—average 510 pounds.

XI.—Two hogs belonging to Mr. T. Sharp of Salem, weighed 752 and 688 pounds. Another belonging to Mr. J. Lawson, weighed 739 lbs. Four belonging to Mr. E. Davis of Bridgton, weighed 752, 660, 650, 582.

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[For the Country Gentleman and Cultivator.]

Experiment in Growing Potatoes.

Luther Tucker & Son—As *actual experiment* is so much more satisfactory than *mere theory* on any subject, particularly on that of the farmer's crops, I have thought best to give you the *result* of my potato crop the past season. I planted upon a rather light, yellow sandy loam, much inclined to sand, (following a crop of buckwheat,) with a very light coat of barnyard manure, (the number of loads I cannot give, but few and small,) plowed in.

For the sake of easy and ready reference, I give it in a table—first, showing the number of rods of ground planted, and the number of hills upon it, three feet apart both ways—second, the number of bushels raised, (omitting the smaller fractions,) the number of hills per bushel, and the rate per acre.

The potatoes were cut, then wet and dried off in quick-lime, and two pieces planted in a hill. They were hoed but once, and owing to the wet season, the grass had grown so luxuriantly as to form quite a stiff sod, making it very tedious and expensive digging.

	Hills planted.	Rods of ground.	Bushels raised.	Hills per bushel.	Rate pr acre.
Jenny Lind,..........	121	4	7½	16	302
Garnet Chili,.........	121	4	7	17	285
Canada Red,.........	1,573	52	87½	18	269
Early Pink-Eye,......	2,783	92	139	20	242
Mountain Pink-Eye,	121	4	6	20	242
Peach Blow,..........	2,057	68	89½	23	210
Black Diamond,.....	121	4	5	24	202
Adams' Red, ...	1,815	60	67	27	179
Prince Albert,.......	242	8	7	34	142
Blue Pink-Eye,......	2,662	88	74	36	135
New-Hartford, ...	242	8	5	45	107

I do not offer the latter part of the table as being a large crop, but more to show the *result* of the whole experiment. Fulton.

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[For the Country Gentleman and Cultivator.]

INDIAN CORN

While I am writing, I believe I will give my plan of planting corn. After plowing the land, run off the corn rows with a "shovel plow," and drill the corn. Then with a "bull tongue," or narrow shovel, run on each side, making a "list" on the corn. In about ten or twelve days—that is, about the time the corn is sprouting—take a board 14 inches long and 8 or 10 wide; bore a hole in it, and screw it on to the shovel plow stock, and run it on the top of the "list." It levels the list down beautifully, knocks off the clods, breaks the crust, gives the young grass and weeds, which had sprouted, a back set, and in a few days the young corn comes up through this clean mellow bed, ready to grow right off. It is the best working the corn can have. And as a hand, with a good horse, can scrape 8 or 10 acres a day, a farmer can get his whole crop worked over in a few days, and thus get the start of his work—no small matter in so busy a season.

My main crop has been tobacco for a good many years, and at some future time I may give you the most approved plan of managing that very troublesome but profitable crop. The year before last, my crop averaged me one hundred and twenty dollars to the acre, on new ground without manure. The land cost four dollars per acre. Last year I put the same land in tobacco, without manure, and had just as good a crop as the year before. It is now in wheat, and if the season is a good one, will make a large yield. So much for some of our North Carolina land.

Greensboro, N. C. A. C. C.

[For the Country Gentleman and Cultivator.]

Important Experiment in Cheese-Making.

The dairy season is about commencing again, and I desire the privilege of a corner in your paper, to give the result of extended experiments in cheese-making. In the first place I shall take it for granted that the whole process up to salting, is well understood, for it is of *salting* that I wish to speak in this article.

In June, 1859, I finished a few cheeses after the following manner: When my curd was scalded, (I practice thorough scalding,) I threw into the vat about four quarts of salt—sometimes only three for a cheese of 50 to 60 pounds, stirring thoroughly. Those which went into the hoop before being well cooled off, acted badly; but when I took time and means to cool sufficiently, the cheeses were very fine. On the whole, I did not like the process and abandoned it.

In 1860, I commenced again, changing the programme as follows: After scalding I drew off the whey, leaving just enough to float the curd, and began to cool off, hurrying the process by pumping in cold water and changing often. Then, to a curd of say 60 pounds, a little more or less, I threw in sometimes three and sometimes four quarts of salt, and stirred till well cooled—then drew off the salted whey, and threw it on the compost heap—put the curd to press, and pressed rapidly and thoroughly. And now for the result. I lost from my whey tub about three pails of whey and some salt. I gained in this, that my dripping tub under the press, never had a particle of cream rise upon it, and in having a cheese that gave me no trouble in curing, and that when sent to market sold for the very highest price, and called forth the unqualified approbation of dealers as being perfect in all respects—fine flavored, very solid, (not porous,) and very fat.

And now let me talk to the experience of dairymen. In the old fashioned way of breaking up and salting a curd, more or less bruising of the curd to break the lumps, in order to get the salt evenly distributed, is necessary, and when put to press the white whey runs off freely—in other words the cream runs off, and of course with it the richness of the cheese, and more or less of its weight, and if the curd is very dry you are liable to get your cheese too high salted, and if not, the reverse.

My experiments clearly prove that a curd salted in whey will retain no more salt than it needs, and that as every particle comes in contact with the brine through the operation of stirring, no bruising is necessary. Whether this is the philosophy of it or not, I am not chemist enough to determine, but I do know that if there is no discharge of white whey, or cream, it is retained in the cheese, adding to it both richness and weight as a remuneration for the extra salt and the wasted whey.

I have written some and talked much about cheese-making, and I flatter myself that the cheese from my neighborhood stands as well in market as that from any other section of the State; and with this I hand you a circular which I distributed among dairymen some years since, and before I had experimented in cheese-making. It was generally approved, (setting aside its irony, which was intended to hit off particular cases,) and needs but little alteration, except I would heartily advise the above method of salting as a decided improvement.

I would also recommend instead of the old fashioned tin curd cutter, the dairy knife manufactured by D. G. Young at Cedarville, Herkimer Co. I consider this knife a valuable improvement. I use and would also recommend a cheese vat with heater attached, manufactured by W. Ralph at Holland Patent, Oneida Co. With this apparatus I make a cheese with a half bushel basket of hard wood chips, and am sorry to find that neither of these gentlemen advertise their wares in your columns.

I send you the circular, and you may wish to make some extracts from it. D. *Oneida Co., N. Y.*

[For the Country Gentleman and Cultivator.]

AGRICULTURE IN NOVA SCOTIA.

Eds. Co. Gent.—As your correspondents, in different parts of the Union, occasionally express the obligations they feel themselves under for the information derived from your valuable journals, I thought it would be gratifying to you to receive a similar expression from some of us in Nova Scotia. If affords me then much pleasure to assure you that The Cultivator is highly appreciated by all who have taken it during the eight years in which I have interested myself in circulating it among my friends and neighbors in this township. Falling in with it accidentally in the spring of 1853, I was favorably impressed with its typographical neatness, the beauty and finish of its wood cuts, and the variety of useful information on all subjects of garden, farm, and domestic economy. Superadded to all these excellencies was its marvelous cheapness; it was a specimen of an article not often met with, in which *goodness and cheapness* are combined. I made up my mind to take it, as it was just the thing I wanted, and also determined to use my endeavors to obtain subscribers for it in my neighborhood. Since then, I have in different years succeeded in gaining from 25 to 40 subscribers a year—nothing like what the circulation of such a magazine ought to be—but even those few copies have done a good work among those who took them, in leading them to adopt improvements in drainage, tillage, care of animals, &c.

The first piece of drainage ever attempted in this county was undertaken by a gentleman whom I had induced (rather hesitatingly on his part,) to subscribe for The Cultivator. On my recommending the paper to him, he told me that the systems of farming advocated in agricultural papers, in a word, "*book farming*," would not suit this country, and do what we would, we could not grow grain in this part of the province on account of our frequent heavy sea fogs in summer. I replied, that though I was no farmer myself, yet I had ventured to form an opinion on the subject from reading and observation, and this opinion was, "that it was not the fog *above* ground, but the fog *below* the ground that prevented wheat from growing and ripening, and that if the land was drained enough to carry off the surplus stagnant water from the subsoil, all grains would grow well and ripen, and that wheat in particular, required a dry and warm soil for its roots. Our conversation ended by his handing me the price of subscription, and the expression of his determination to try what draining would do. He subsequently told me that he experimented on a field near his house, which had been always too wet to grow anything thrivingly on it. On this piece he put a number of French drains, filling them up within 18 or 20 inches of the surface with stones. Many of his neighbors laughed at him for what they thought would be a waste of time, labor, and money, but he accomplished his object, and next year seeded his drained land with wheat. As the grain grew it was the admiration of every one who has an eye to observe such things, and when the time of harvest came, he had the satisfaction and pleasure of taking something over forty bushels of good grain, plump, and full weight to the acre—the field contained about two acres. Every year since then, the same land has yielded heavy crops of hay, and the grass grows directly over the drains much higher and better than on other portions of the field.

I will at present only add, that not only in this county, but throughout the Province, agricultural matters are receiving an attention greater than has been devoted to them for many years past. Besides The Cultivator and Co. Gent., other agricultural papers are taken pretty largely, and the ancient prejudices against book-farming are rapidly fading away. Improved stock of all kinds have been imported from Scotland, England and the United States, by the Province and by Societies. Farmers are building underground receptacles to their barns for preserving their manure, and everything betokens a disposition to adopt the improvements of modern science.

J. W. H. R.

Yarmouth, N. S.

[For the Country Gentleman and Cultivator.]

EXPERIMENTS IN FEEDING SWINE.

Messrs. Tucker—I undertook several experiments the past year. Many will never be completed I fear; but here is one made to find how many head of hogs were necessary to eat up a crop of corn. Four hogs, weighing 560 lbs., were put up on the 8th Sept.—fed all they could eat of good corn and clean water, three times a day *regularly*—pumpkins and potatoes raw occasionally, not often —salt, ashes and charcoal generally once a week. They were kept in a pen 10 ft. by 12 ft., boarded, half covered and made warm—the other, kept clear for feeding. They consumed just 60 bushels (1½ bush. of ears to the bush.)—were killed Jan 21st, weighing nett 712 lbs., to which add one-fifth for the gross weight, makes 854—560=294 lbs. increase, or 4.90 lbs. to the bushel of corn.

They consumed 37 bush. from Sept. 8 to Nov. 10—from then till Jan. 21, 23 bushels. Had they been killed the middle of Nov., there would have been more profit. I may safely say that they did the worst of any hogs that I have had anything to do with, and they were well cared for. They were put in a small pen all boarded, as my partner believed that the best way, whilst I held that a boarded pen to sleep and feed on, together with a small lot, was the best, and our neighbor's results prove it so. His were fed in that manner, though he did not measure his corn. Every one acknowledged that he had a great advantage. We purchased them from him—one of his so like one of ours we could scarcely distinguish them. When we took it from his pen, it weighed, fatted, nearly 250 lbs., ours about 175 lbs. This and another black one, increased very little after beginning of Nov. The other two, white, having a good share of Suffolk blood in them, say one-fourth, increased all the time, and they were younger and smaller.

I am persuaded that to fatten well in small pens, they should be either *full grown*, or have a *large proportion* of Suffolk or other good blood in them. Can give another proof of this good blood vs. common. Though I do not believe in penning up shoats, was compelled to pen up five Suffolk grades and six large stock shoats. The latter were the finest, averaging 53 lbs., not varying more than 7 lbs. The five shoats were the remainder of a lot of 20, and therefore the worst, four of them being sows, yet they have done the best. One that weighed 48 lbs., now weighs 127 lbs. The six have gained about 20 to 25 lbs., and look bad, hair dirty and rough. E. S. Atkinson.

Bloomington, Ill., Feb. 20.

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[For the Country Gentleman and Cultivator.]

Disease of Cows after Calving.

Messrs. Editors—In Country Gentleman, vol. 15, p. 412, T. W. Bennum, Clark Co., Iowa, wishes information in regard to some cows that have died in that vicinity, that dropped their calves and appeared to be doing well; and in about 48 hours appeared to lose the use of themselves, and died soon after.

As no one, I believe, has answered, and the season is arriving again when this disease most commonly happens —in warm weather when we have good pastures—I give my ideas. This disease is properly called the milk fever, or dropping after calving. This complaint seldom or ever happens to cows that are poor, but to cows that are in high condition, and cows removed from low keeping to high feeding, good milkers, full of blood and milk. The cause is this—when she parts with the calf, if the milk does not come freely, it is thrown back on the system, and she loses the use of herself and drops down, and if in warm weather is almost certain to die. If the cow is in good order and full of milk, it is almost a certain remedy to commence milking, say two or three weeks before she calves. If the milk comes freely all the better; any how, milk regularly, as if she had calved. Get the milk to come freely, and little or no danger. This is prevention, which in this case, is worth two pounds of cure.

When prevention is neglected, this disease sometimes shows itself in a short time after calving, but most commonly from two to three days. The common signs of this disorder are, an inability to stand, stretching out the legs, violent convulsions, cold extremities, mouth open, tongue out at one side, &c.

Treatment.—When she is laid down, the fore-parts should be considerably elevated in order to favor evacuations. It will be needless to offer any food, for she cannot eat while in this state. She should be attended, night and day, as she will have restless fits, will often rise upon her knees in attempting to get upon her legs, and fall again in a position not proper to lie in. The person who attends to her must be careful to keep her in a right posture, as before described, with the head and shoulders much higher than the other parts.

The bowels must be opened. Give one pound of Glauber's or Epsom salts, dissolved in three pints of warm water; when dissolved, add a tablespoonful of ginger in powder, and a teacupful of molasses, and when milk-warm give to the cow. If the above does not physic freely in ten or twelve hours, repeat once in twelve hours with half the above, till it operates. A Subscriber.

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[For the Country Gentleman and Cultivator.]

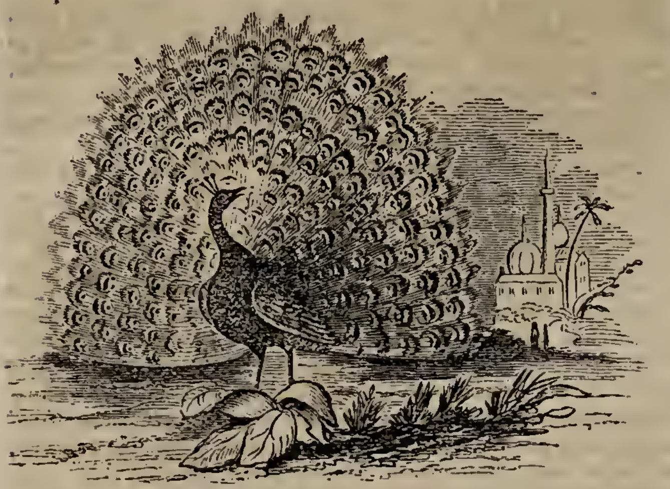
Agricultural Exhibitions and Grumblers.

Messrs. Editors—An unjust, an ungenerous, and injudicious attack is made in your paper upon a most useful, well-meaning and generally amiable class. Bad enough had it come from an enemy. Still worse an attack from a friend of agricultural societies upon their best counsellors and most steady supporters. What would agricultural societies—what would their exhibitions be without grumblers? What would a railroad train be without brakes, a balloon without sand bags, a steam engine without a governor, a newspaper without correspondents? Grumblers indeed! Paradise of grumblers! more likely paradise of horse jockeys. Easy enough to call names, but grumblers that grumble with good reason, and systematically and impressively, and, if need be, in chorus, are as useful as watch dogs, as policemen, even as officers of agricultural societies.

No wrong, Messrs. Editors, has ever been redressed, no evil remedied, no improvement carried out, no malpractice unearthed, no abuse corrected, without the aid of grumbling, without a grumbler to begin the work, and a choir of grumblers to finish it. So, Messrs. Editors, do not not let any one abuse grumblers; and oh! brother farmers, please grumble; if need be, *growl.* You have always been too quiet, you have let your agricultural societies too much alone; come to their meetings, and do not whisper nor talk compliments. If you find anything to grumble at, grumble *loud.* But *do not stay at home to growl.* Do not let things manage themselves, and then grumble because they don't manage themselver right. Show that you take an interest, if only by grumbling, not about little personal slights, or errors of judgment, or accidental omissions, except to prevent their repetition, but reasonably, considerately, and when some good may come of it.

Farmers, you have in your agricultural societies the means of making your interests known, your influence felt, your voice heard, your cause represented, if only you will take an interest in your societies. Strengthen their hands, make them your representatives, and in them represent yourselves, meet in friendly council, commit your interests to good agents, and then support those agents. You have long been content to have your affairs managed by the village lawyer, and tavern keeper, and "country merchant," and little politician. Take care of your own affairs, and at the right time. Better a man who comes to the annual meeting and grumbles, than one who stays at home. Better a grumbler than one who takes no interest, says

A GRUMBLER.



[For the Country Gentleman and Cultivator.]

On Raising the Peacock.

Eds. Co. Gent.—In the 7th No. of Co. Gent., vol. 16, I notice an article under the above caption, by Alfred Baylies, taken from the New-England Farmer, in which he states some things entirely at variance with my experience. In the first place he says, "The hen lays her eggs early in June, so by the first or second week in July she is off with her young, which she is pretty sure to bring off and bring up." Now this is all true, with the exception of "bringing up." If he had said she is pretty sure *not* to bring them up, it would agree with my experience. In the second place he says, "He (the peacock) will not be confined." In answer to this I would beg leave to say that we have had from eight to ten confined in a small poultry-yard at Springside for the last six or eight years, where they seem perfectly contented in confinement, and very anxious to return when they happen to be out.

In regard to his propensity for killing his young, not only of his kind, but the destruction of other poultry, accounts are very contradictory. It is believed, however, that the peacock becomes more cruel as he avances in life, although they often vary in their disposition. It cannot be denied that they are tyrannical, pugnacious and persevering until they are masters of the poultry-yard. In their attacks two or three often join, and by their united action come off victorious. Let a strange bird of any kind be put into the yard, whether turkey or game cock, or goose or duck, or any animal, they are sure to attack them; sometimes, however, they meet with their match, as in the case of the introduction of a sandhill crane into the yard about two years ago. His high and towering head, long and powerful bill, was more than they could compete with, and they gave it up, after several battles as a hopeless case. It is but a short time since we discovered one of them engaged in fighting with a male Gazelle, but, as might have been expected, came off second best.

Mr. Baylies further says, "They are easily raised, require little or no care," &c. Now this is entirely at variance with our experience, as we have always found them extremely tender, delicate, and very difficult to rear; showing all that constitutional tendency which bespeak their tropical origin; but after they are six or eight months old, they become enured to our northern climate, and live and roost among the common poultry.

The newly hatched pea-chicks are interesting little creatures, pretty in appearance, very tame and confident. They may be made to sit upon the hand to pick flies from the window. But to be successful with them at that age, they require feeding quite often with many nice things, such as ant's eggs, curd of milk, eggs boiled hard, with crumbs of bread, chopped fine, and should be prepared fresh every day. Like the young Guinea fowl, the demands of nature for the growth of bone, muscle, and particularly of feathers, are so great that no subsequent supply of food can make up for a fast of a few hours only. The feathers still grow and drain the sources of vitality, still faster than they can be supplied, till the young birds faint and expire for want of fullness.

The chicks should be housed in wet weather, as damp or cold is fatal to them; so is intense sunshine, and hence they should not be turned out under a scorching sun; but every day when dry and warm, should be allowed to divert themselves on the smooth turf. The mother should be cooped for two or three weeks, to prevent her from rambling too far from home.

Peacocks are accused, and not without some degree of truth however, of being great depredators in the garden, when allowed to roam, where they are sad pests if once they find their way thither. They will destroy a large patch of strawberries as fast as they ripen, if not kept off. For this there is no help. They will steal off at first dawn of day to the work of plunder. If a vineyard is at hand, the greenness and sourness of the grapes, which caused the fox to refrain, would be but a weak argument with them.

Exclusive of the consideration of ornament to the rural mansion, peacocks are useful for the destruction of all kinds of reptiles and insects; also to keep watch, as they will roost when at liberty, on the most elevated places, on the highest trees, or tops of chimneys, where they will sound the alarm should any midnight marauders be around. C. N. Bement.

ESTIMATING HAY IN BULK.

Messrs. Editors—Some inquiries have been made in the Country Gentleman about weighing and measuring hay. I shall sell one hundred tons of hay this winter, and as it is all weighed, can give you the result of as much as I have sold to the present time.

Mow No. 1, 21 by 21 feet square, 13 feet in depth, required 460 solid feet to weigh 2,000 lbs. This hay was timothy, not very coarse; cut while in blossom, and well mowed away by two men.

Mow No. 2, 10 by 20 feet square, 5½ feet in depth, the hay the same quality as No. 1, required 650 solid feet to to weigh 2000 pounds.

Mow No. 3, 11 by 24 feet square, 14 feet in depth. Timothy hay, part of it rather too ripe when cut; required 500 solid feet to weigh 2,000 pounds.

My advice to persons buying hay, is to rely on their own judgment. Ascertain if the hay was cut at the proper time and mowed away properly. Take into account the size and depth of the mow, for the larger the size, and greater the depth, the less number of feet will be required to weigh a ton. For instance, it would require a greater number of feet to weigh a ton from a mow 8 feet deep, than from a mow 16 feet deep—also coarse hay will require a greater number of feet to weigh a ton, than fine hay.

My experience is, it will require 500 solid feet of Timothy hay, cut in season and mowed away as it should be, to weigh a ton, taken from the center of a mow 12 by 24 feet square and 10 feet in depth. I have more hay to weigh, and will give you the result if you wish.

Duchess Co., N. Y. J. D. Kerley.

Recipe for Curing Beef.

Below I give a recipe for curing beef, that I do not recollect of seeing in print, which I received from a friend, and have tried and like it very much. For 100 pounds of beef:

6 quarts of salt, (or 10 lbs.)
4 pounds of sugar.
4 ounces of saleratus.
2 ounces of saltpetre.

Pulverize the saltpetre, and mix the whole together; put it on as you pack the beef. Pack the beef close, and put a stone on to keep it down. G. W. S. *Trenton, N. Y.*

Keeping Cabbage in Winter.

A correspondent of the Ohio Cultivator says the following is the best way, according to his experience, to keep cabbage fresh and hardy for use: Cut the heads out with two or three courses of outside leaves upon them, fold close to the head, pack them in barrels, set them in a cellar, if the cellar is dry, keep outside leaves on top of the cabbage, to exclude enough air to prevent wilting. Reader, try it, and you will give up the old way of trenching your cabbage out of doors.

There is an important addition that should be made to the above mentioned mode, which will render it an excellent one. Pack the cabbage heads in the barrel (or dry goods box is more convenient,) with nice damp moss, such as nurserymen use. It will preserve the cabbage just sufficiently damp and fresh all winter. Beets, carrots, celery, &c., may be kept finely in this way.—[Eds. Co. Gent.

Inquiries and Answers.

Millet.—I have been looking over the back numbers of The Cultivator, for information in reference to the cultivation of millet, and have failed (as I have not long been a subscriber for your valuable paper,) to find any thing about it. As farmers in this vicinity do not grow it, I infer that they consider it not worth particular attention. Will you please give us your views, as to its comparative value as fodder, and especially as green fodder for cows. P. *North Brandon, Ct.* [There is a difference of opinion on this subject, and we would therefore esteem it a favor if any of our readers who have cultivated it for some time and extent, would give the results of their experience—stating cost, amount of crop, value, &c., as accurately as may be.]

Seed Drills—Japanese Wheat—Can you inform me, through The Cultivator, where I can get a clover seed roller, sowing from 2 to 12 quarts or more per acre evenly, and at what price ?(1.) Does the Kuhns & Haines Patent Grain Drill sow as much wheat per acre when driving fast as it does by slow driving, or by leaning to one side as much as when leaning to the other ?(2.) Do you know anything about the Japanese wheat? It is asserted in an advertisement that it will yield as much as 400 bushels per acre, weighing 56 lbs. per bushel, and to be worth as much as corn to feed to stock—will produce whiter flour than wheat.(3.) H. Keller. *Wrightsville, Penn.* [1. Bickford & Huffman of Macedon, N. Y., manufacture a clover seed sower, to be used with or without their grain drill, but we do not know the cost, to be used as proposed. 2. We are not acquainted with the drill mentioned, but all the best drills sow alike in all positions, Bickford & Huffman's among the number 3. The wheat advertised at a high price as Japanese wheat, is reported to be some old valueless sort.]

Orchard Houses.—A short chapter in The Cultivator, on Orchard Houses, would be very acceptable to many, giving the size of pots and the size of the trees, (pears for instance,) when brought to a bearing state. I have a fine collection of pears, some twenty varieties, in bearing, but the trees last season were severely handled by the "blight." I shall probably lose a dozen trees, and many more badly injured. G. W. C. [We would advise our correspondent to procure *Rivers' Orchard House*, the best treatise that has been written on the subject, and which is sent by mail, by C. M. Saxton, Barker & Co., the publishers, New-York, on receipt of 40 cents. It has various illustrations, plans, and estimates of structures, &c. It must be remembered, however, that in England, where this work was written, Orchard Houses are more valuable than where trees grow freely, and bear and ripen fine crops in the open air, as in this country. For those who have abundant means, an orchard house well and thoroughly managed, is a beautiful ornament; but one-tenth of the labor and expense required by one, would keep a large fruit garden in a high state of cultivation, clear off the insects, and apply every means for successful growth.]

Ozier Willow.—As I am deeply interested in the welfare of Iowa, and Iowa particularly interested in materials for fencing, you would confer a great favor on your subscribers by informing them whether the Ozier Willow will stand this climate—whether it is the same as the Black English Willow, which is about being introduced here at such enormous rates. Yours truly for twenty years. Iowa City. [The Ozier Willow in most repute in Europe does not succeed here. The best, for both basket work and for hedges, is the *Salix purpurea.* It is advertised in this paper, by D. L. Halsey, at $3 per 1,000. The Black English Willow we do not know. If it is the *Salix nigra*, we should think it of little value; it grows abundantly along some portions of the banks of the Ohio river. There are some 200 species of willow, and many varieties, and many of the species are difficult to distinguish from each other, unless side by side]

China Tea Spring Wheat.—W. S. of Bucks Co., Pa., (p. 112,) asks some of your correspondents to name the best kind of spring wheat. In answer I would say that the China Tea variety has been grown around here for several years with very good success, and is superior, in many respects, to any other variety. It is a late variety, and for that reason it generally escapes the midge. It grows to a greater height than the Club, and is therefore easy to harvest. The Hon. A. B. Dickinson of Steuben Co., speaks of this variety thus—"The best variety of spring wheat that I have ever seen is the variety known in this section as the China Tea. There are many names for the same wheat. It is necessary to give a description of the variety, that there should be no mistake. It is a white chaff, bearded, and grows (on good land) very late; the head is very long, kernels not very close together, berry large, a good variety to mix with the Canada or Milwaukee Club, either of which grows six or eight inches shorter. When sown together they ripen at the same time, and yield 4 or 5 bushels more to the acre mixed than when sown separately." J. L. Johnson.
Palermo, Oswego Co., N. Y.

Spring Wheat.—The variety preferred in this county, St. Lawrence, N. Y., and I believe in Upper Canada, is the Fife or Scotch. It has taken the place of the Club and the Black Sea, and very few grow the China, which is more profitable than the Fife wheat for the miller, but not for the farmer. The Fife, or as more commonly called, the Scotch wheat, is a strong growing handsome grain, and makes a handsomer, better colored sample than the Club. H. L. T.

Yorkshire Pigs.—In answer to an inquiry of J. M., Morpeth, C. W., as to the most profitable breed of hogs, I beg leave to say that some time since I saw at Mr. James Brodie's, Maple Grove, Jefferson Co., a Yorkshire hog killed—one of his imported blood. It is a breed he has had some time, and tells me as far as maturing early, great fecundity, smallness of bone, and small quantity of food necessary, he thinks they are pre-eminent. They are very large, deep, long, handsome, and plenty of covering to protect them from all weathers. The hog he killed was a last March pig, eleven months old, and dressed 483 pounds. He also told me that some time ago he weighed and then put up to feed, a boar and sow, he fed them 20½ quarts of skim milk, and one pound ship stuff per day, and at the end of seven days the boar had gained 20 pounds, and the sow 24. John Clark. *Jeff. Co.*

Volumes of the Cultivator.—Will you please answer through the Co. Gent. how many volumes of the The Cultivator you have on hand for sale that were published from the commencement, up to the 1858, and at what price. J. C. H. *Weston, N. J.* [We have the eight volumes for the years 1838-9-40-41-2-3-4-5; and those from 1853 to the present time. We will supply these by Express at 75 cents per vol., or by mail, postpaid, at $1 per vol]

Sweeny.—Will you be kind enough to give me a remedy for sweeny in the horse, where the shoulder is wasted down to the bone? W. H. *Crawford Co., Mo.* [The best remedy, doubtless, is rest, or very moderate usage, with what is termed a Dutch or strap collar. We have seen several remedies tried, but so far as we could judge, the animal, where a recovery took place, would have got well as soon without them. In the case mentioned, an entire cure could not probably be effected.]

Sweeny.—I have a very fine young horse which has the sweeney in one of his shoulders. I have not worked him for two months. The hollow you could lay your hand in. Should you know anything would fill up the cavity and cure, be pleased to insert it in your next Co. Gent., and much oblige J. S. *New Market, Va.* [In answer to this, we give the following, from another correspondent:]

Sweeny.—In your issue of Feb. 28th, I see an inquiry signed "W. H.," asking "for a remedy for sweeny in the horse." "Sweeny" is caused by injuries received in the limb affected. It may be a sprain or bruise in any part of the limb or foot, which causes the animal not to use that limb as much as the others, and "sweeny" comes from the want of the natural use of the limb If "W. H." will find the cause which prevents his horse from using that limb freely and remove it, the horse's shoulder will fill up the same as before he was injured. If "W. H." had a finger taken off, or a wrist sprained, or was to receive any injury that would cause him to lose the use of an arm for a time, he would find upon examination that his shoulder had fell away, but as soon as he recovered the full use of his arm, his shoulder would fill up. So it is with the horse. Y. M. *Fayette, Pa.*

Disease among Sheep.—Can any of your numerous readers give me the name and remedy for a disease among my sheep—a disease which I do not understand, and cannot account for, as it has so far attacked the best, fattest, and apparently the thriftiest of the flock. I do not discover any premonitory symptoms—when first discovered, they stand perfectly quiet, with head down and ears drooping—when made to move, stagger along and perhaps fall—without the ability to get up again unless assisted--when down lie perfectly quiet. Do not appear to suffer unless disturbed, when they make it manifest by moans—will not eat, and live from one to four days after being taken. I have lost five, all within two weeks, and have the sixth patient on hand now, with as fair a chance to die as any of the others had. I do not know as I can describe this disease any better than I have done. If any of your readers can give me any information on the subject, or suggest any reasonable experiments, I will try them, and as our legislators say, report progress. J. *Amsterdam, N. Y.*

Persian Yellow Roses.—Please inform me through The Cultivator, of the best mode of propagating the Persian Yellow Rose. All my layers failed last summer. Mrs. E. Jeffrey. *Randolph Co, Ill.* [Bud it on the Manetti stock at the surface of the ground, or graft it below the surface. The Persian Yellow is a feeble grower in most soils, but this stock imparts vigor.]

Sick Ox.—Say to A. A. Cole, p 140, that if I had his ox, I would try a rowel in the swelling, and would keep it in some time. It will do no harm if it does not benefit him. I am almost as much in favor of this treatment, as the correspondent that recommended sawing off the horn for ails in the ox, &c. A. M.

Worms im Hogs.—Seeing in your Co. Gent. an inquiry for a remedy for worms in hogs, I would recommend the following: One teaspoonful of copperas, dissolved in warm water, and given once every alternate day for a week. This was recommended to me where I was farming, and my hogs were troubled in the same way. It acted like a charm, and my hogs took on flesh very rapidly after the application.
Aurora. JESSE BRADY.

Remedy for Calves Sucking Cows.—Sometime since an inquiry was made in the Co. Gent. as to a method of preventing a cow from sucking herself, a calf from sucking a cow, or calves from sucking one another—I do not remember which. A sufficient remedy for all or each of these habits, is to apply to the teats, ears, or whatever part is sucked, a strong mixture of lard and cayenne pepper. One or two applications will be found effectual. G. W. Durant. *Rensselaerville.*

Worms in Swine.—You can inform "A Reader," that if he will mix wood ashes liberally with the food of his pigs and shoats, with the addition of a handful of salt to each shoat, he will soon remove the worms from them, and will not hurt them if worms are not the trouble with them. I have had considerable experience with hogs, and always give them from pigs, more or less ashes in their food, or in a dry state, and they will readily eat them in either case, and a sure cure for worms. Charcoal given to hogs that are fattening, as often as once a week, is readily eaten by them, and improves the quality of the pork, and renders the animal more easily fattened. Henry Jordan. *Kennebunk, Maine.*

Cheese Press.—I wish to know what is the best and cheapest cheese press, and where to be obtained? Also would like to know what is considered the best standard work, upon the dairy, among eastern cheese makers. Subscriber. *East Hamburg, N. Y.* [The best work is Flint's Treatise on Milch Cows and Dairy Farming, which contains figures and descriptions of several forms of cheese press, each having its peculiar advantages, and from which our correspondent may select. Inquiries for a good cheese press, however, are quite frequent, and we should be glad to hear from cheese makers on the subject.]

Answers to Questions of J. T. H, Co. Gent., Jan. 24, p. 64.—1. On Framing Braces. The rule for framing braces is 5 inches to the foot—that is, if your run is 2 feet each way. Then your brace will be 2 feet 10 inches long, and if the run is 3 feet each way, then the brace will be 4 feet 3 inches long—or, in other words, every foot you add to the run adds 5 inches to the length of the brace.——2. What is the rule for finding the number of square feet in saw logs? To this question I will give the number of square feet in different sized logs. In a log 12 feet long and 24 inches in diameter, there is 300 square feet. In a log 15 feet long, 26 inches in diameter, there is 453 square feet; and in a log 12 feet long, and 12 inches in diameter, there is 48 square feet.——3. Which pays the best, to sell your wood at $2 per cord, or burn it into coal at $6 per 100 bushels? Now, according to the best of my knowledge and information, it will pay best to sell your wood at $2 per cord. I will give my reasons. In the first place it will take 2½ cords of 4 foot wood to make 100 bushels of coal, which is $5. 2d. The loading and unloading of the wood at the pit, would cost about the same labor that it would to load and unload it in market, to say nothing of the difference in distance. Besides all this, you have your coal-pit to set up and watch while it is burning, and when this is done, you must load and draw it to market, all for $1 on the 100 bushels.——Preparation of Night Soil. In regard to this, I would recommend mixing with night soil equal parts of lime and sawdust—spread and plow in.——5. Would cement, placed around fence posts, prevent their decaying? This is altogether a new idea to me. Still my impression is that it would not prevent them from decaying.——6. Does not manure pay better on wheat ground than on corn? In my opinion there is no way of fitting a piece of ground for spring wheat better than to draw out your coarse barn-yard manure, and plant with corn, and hoe well. The corn will derive considerable benefit from the manure; but at the time of sowing your wheat the next spring, the manure will be well rotted, consequently the wheat crop will receive the most benefit from the manure.——7. Is it best to give colts a little oats the first winter? I will answer this question by saying I should prefer a little oat meal and carrots. P. D.

Pumps.—I have a well that is 17 feet deep. I want to get a pump in it, and would like to know what kind would be the best, and what the price would be. I have understood that there is a pump that will draw the water whenever a man walks on the board—that is, the weight pumps up the water. W. P. *Coveville, Pa.* [A common well made cast-iron pump, will doubtless be the best thing, costong only a few dollars, and sold at all large hardware establishments. Where exposed to freezing, there is a contrivance for letting off the water in cold weather. There is nothing gained by "walking on the board," it is complex and useless, hard to keep long in order, and a man's hands are usually quite as convenient to work a pump as his legs.]

☞ Please to inform me through The Cultivator, how to candy the peel of lemon, so that it can be used in cooking instead of citron, and oblige A Constant Reader.

"Bone Wen."—I have an ox that has got a bone wen on the side of his cheek. Can any of the readers of the Co. Gent. inform me whether it can be cured, and how? E. T.

Bad Habit in a Horse.—I have a horse, six years old, that has the habit, when in harness and standing hitched, of tossing his head up and down. Can you tell how to prevent and cure the habit? H. J. R. *Peoria, Ill*

Removing Old Putty.—G. H. asks how to remove old putty. The question troubled me in boyhood, as I had to refit an old clock-glass. I was about to try nitric acid, when I remembered that heat softens putty, and soon accomplished the task. Heat a piece of iron of suitable size and shape—apply it to the putty, and let the knife follow as fast as the oily compound softens. S. A. *New-Jersey.*

Hedges for Salt Marshes. — Would you inform me through The Cultivator, of any shrub or plant that would grow and form a hedge on a piece of land which was once salt marsh, but has been dyked for about fifteen years? I have tried willows, but they will not grow. I suppose it is owing to the salt contained in the ground. The soil is a black muck, and produces good crops of hay, potatoes, and roots of any description. If you will give me the above information you will greatly oblige me. G. W. K. *Yarmouth, Nova Scotia.* [We have had no experience on this subject—will some of our readers who may possess the desired information, please furnish it.]

Sowing Plaster.—I wish to sow plaster on meadows this spring—how will it do to sow it in March, upon the frozen ground, or even upon a light snow? J. L. R. [Early sowing is generally regarded best—the plaster dissolving and entering the soil, acting at once upon the young plants. We have known very striking results, however, from sowing when the clover had grown a few inches. We would not recommend sowing on frozen ground, as the early rains might wash off the plaster before it was dissolved or could penetrate the earth. Sow as soon as the soil is thawed and settled.]

Subsoiling.—Please inquire through "The Cultivator" of some of your practical farmers, what is their experience in subsoiling, and also whether once is enough for the same field, or is it better to repeat the operation during the succeeding year or year after? J. L. [Additional facts to the already accumulated evidence in favor of subsoiling from any of our correspondents, especially if calculated to throw any new light on the subject, would be acceptable. The operation is sometimes repeated, across the first, to deepen and render it more uniform and perfect. The frequency of its repetition must depend much on the nature of the soil—if wet and adhesive, subsoiling soon loses its efficacy, and in fact it is hardly worth while to perform it on such soils. A lighter, or a well drained subsoil, will feel its effects for many years, the advantages gradually passing away, and needing repetition. Hard, heavy, hard-pan subsoils, are most benefitted, if the land has been well drained.

Root-Grafting.—In your issue of Feb. 14, I see it stated that "cuttings will succeed well by inserting them in a stout portion of root." Will you be kind enough to give us a full description of the operation—the depth of planting, and at what season? Y. M. *Fayette, Pa.* [Our correspondent will find a full description, with copious illustrations, of the process of root-grafting, in the Register for 1860, or 2d volume of Rural Affairs, p. 316, as applied to the propagation of the apple, nearly the only fruit that succeeds well, thus treated, under ordinary circumstances.]

Sending grafts by Mail.—(*A. M.*) Procure a piece of oil-silk, (such as is used for lining straw hats;) let it be an inch or two longer than the grafts; wrap the grafts within, and the oil cloth snugly about them, bringing up the ends, and make the whole moisture-tight, by passing a small thread around 40 or 50 times from end to end. Wrap a little paper about them outside of the oil cloth always, to prevent bruising, and enclose them in a letter. They will go safely 1000 miles.

Old Orchards.—I want to inquire the best manner to resuscitate an old apple orchard. J. L. *Philadelphia, Pa.* [The main reliance will be to render the soil rich. Top-dress it with manure, and with some lime and ashes. The owner must use judgment as to the quantity, as soils and circumstances vary greatly. Cultivating shallow, will be useful, although surface mellowing is not nearly so important with deep rooted old trees as with young or newly set trees. Pruning is important, but far less so than enriching. Cut out dead and crowded limbs, and leave a well formed even head, avoiding the removal of large branches so far as practicable]

Transportation of Eggs.—Will eggs which have been carried some distance by railroad hatch? P. T. M. *Becket, Mass.* [Yes, if properly packed and carefully handled.]

Manuring Corn.—A correspondent at Falmouth, Va., (H. B. H.) inquires the best way of manuring his corn with manure which has been accumulating during winter, and with guano and plaster, so as to get the greatest possible yield. If the manure is not too long and fibrous, it may be at once spread on the field—if too coarse, it should be allowed to rot sufficiently to become fine. If litter has been largely used with the manure as it has been deposited, this may afford nearly enough material for admixture; but if the manure is in large large proportion, add loam or turf, to retain volatile parts. Spread the manure, if short enough, on the land, which will be better, if previously plowed, so that it may intermix freely. Spread the manure, then harrow it repeatedly, to break it fine and mix it with the surface. Then turn it in, to a moderate depth,—deeper, as the soil is lighter,—and harrow, prepare and plant the corn. Drop or scatter a spoonful of guano in each hill, with a thin stratum of soil between guano and seed, above or below; or if the guano is mixed with several times its bulk of loam, muck or plaster, this care will not be needed. If well cultivated, a good crop will be the result. The cow manure may be applied to the potato ground in the young orchards, in a similar manner.

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[For the Country Gentleman and Cultivator.]

MORE RECIPES FROM "NANCY."

"Wood's" allusion to my recipe for lemon pie, in the Co. Gent. of Dec. 20, 1860, compels me to acknowledge that her criticism may have been correct as to the tendency of the pie to produce dyspepsia in New-York. It does not have that effect in the family of this deponent. The recipe for "lemon pie," sent herewith, affords as palatable a desert as the other, and one, too, which will not give dyspepsia anywhere. This, with the other recipes, is at your service. Nancy.

Keokuk, Iowa.

Lemon Pie.

For one pie, take two good sized, fresh lemons; grate the rind and squeeze out the juice, and mix with it sugar to make it sufficiently sweet. Line a deep pie plate with pastry, pour in some of the mixture, and cover it with pie crust rolled *very* thin (as thin as possible;) then some of the mixture and crust again, till all the mixture is used.

Cover the whole with a thick crust, and bake in a *slow* oven, that the juice may not cook out.

Sponge Cake.

Eleven eggs, the weight of eleven in sugar, and the weight of six in flour, and the rind (grated) and juice of one lemon.

Plum Pudding.

One teacup of brown sugar or molasses, half a teacup of butter, melted and stirred into the sugar, one teaspoonful of cinnamon, one teacup of milk, sweet or sour, one heaping teaspoonful of soda in the milk, two teaspoonfuls of cream of tartar stirred into the milk, and when foaming mix with the sugar and butter. One pint of seeded raisins, and flour enough to make it as stiff as pound cake. Put in a buttered tin, and steam it two and a half hours.

[For the Country Gentleman and Cultivator.]

BLACK WARTS ON PLUM TREES.

Messrs. Editors—In a January number of the Country Gentleman, we noticed an inquiry in relation to black warts on plum trees. It is about thirty years since we set out a number of plum trees in our garden. They grew well a number of years, but about the time they commenced bearing, the black curl took possession of them, and completely ruined them. For ten or twelve years we did not set out any more; but being in a gentleman's garden, a part of which was occupied with young plum trees, some of which had been grafted, and he offering to sell a dozen, we concluded to try our luck again in raising that very desirable fruit, the plum.

We took twelve, and set them in our garden and around our buildings. They grew finely, but in three or four years the black wart made its appearance. For two or three years we cut them off; but a new set appeared each year, and the conclusion was we should soon lose the whole of them; but on seeing a piece in the Boston Cultivator, recommending the use of iron turnings, we obtained about twelve quarts from a machine shop in the spring of the year, and first hoeing the ground round the trees from the body about two feet, we incorporated about one quart to each tree, hoeing it in, but not so deep as to injure the roots of the trees. As all the warts we saw were removed at the time of the application, and we have seen but two or three since, and these probably escaped notice when the rest were removed, the application proved to be quite effectual. Many of the plum trees in this vicinity have either died or become useless in consequence of black warts, within the last twenty or twenty-five years, and as this is an easy remedy, and very little expense, it would be well for those who wish to preserve their plum trees to try it. David Fisher. *Drewsville, N. H.*

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[For the Cultivator and Country Gentleman]

MANAGEMENT OF PEACH TREES.

Eds. Co. Gent.—Although it is but a short period of time since I first subscribed to your most excellent journal, it has been to me a great source of information and gratification. Being myself deeply interested in anything pertaining to agriculture, I have taken the liberty of giving a little of my experience in the cultivation of peach trees and the application of lime to their roots, having noticed in your issue of the 10th of Jan., of their having been inquiries in relation to such application, in one of the previous editions.

The farmers in *this* vicinity seem to be impressed with the idea that it is useless to undertake to grow the peach tree, in consequence of its having been repeatedly attacked by the yellows. I have been very successful in growing the trees and the peaches. My manner of treatment has been this: I commence every spring, and top down half of last year's growth. Then I examine the roots for borers, making up my mind that the trees may as well die by the knife as by the worms. I cut into the lower extremity of the trees, wherever I find sap oozing out, with a sharp pointed knife, until I find the worm; then put from two to six quarts of slaked lime around the roots. This seems to answer all purposes; although I think it full as good a plan to dig the earth away from the main stem of the tree, and if possible, so much so as to admit of the hand being placed under, where the tap root usually grows; the bark will then become so hard by being exposed to the air, that the borer cannot enter.

I generally put a piece of oil soap in the clefts of the trees, which makes sufficient suds, whenever we have rain, to keep the bark free from insects, and in a good smooth healthy condition.

If this plan is pursued, and the soil well manured and plowed, I have no doubt, if the experimenter never has grown a crop of peaches, he will for the first time. Try it. J. H. M. *Rye, N. Y.*

THE CULTIVATOR.

ALBNAY N. Y., APRIL, 1861.

☞ There was one important point made by Dr. Fitch in the paper read by him at the Annual Meeting of our State Agricultural Society. We have forborne allusion to it, hitherto, in the hope of presenting his remarks at length in his own words; and, in the anticipation of being able soon to do so, we shall now refer only very briefly to the point in question.

Dr. Fitch has heretofore expressed the opinion, as our readers are already aware, that the Wheat Midge, which has been so destructive throughout a large district of country here at the north in years past, will ere long run its course, so to speak, as was the case, for example, with its predecessor, the Hessian fly. That it will cease to become a formidable enemy to our farmers, so many of whom have given up wheat entirely, owing to its ravages. And that, in course of time, we shall be no more liable to loss of crops from this and other insects, than are the farmers of European countries, who suffer now far less than we do from their invincible and relentless forces.

The ground upon which the foregoing views are based, is this: that when an insect first gains a foothold in new territory, its increase in numbers, unrestrained by the parasites and enemies which had made it their prey in other countries, is surprisingly rapid, enabling it sometimes to spread over and devastate immense regions; but that other insects, kindly ordered in the economy of Nature as counter checks upon its multiplication, will eventually follow in its footsteps, and restrain within certain limits its power of evil. Dr. Fitch illustrated this very pointedly, in the present experience our California friends are having with that emblem of useful industry, the Honey Bee,—which, according to newspapers and correspondents, has there frequently become almost as abundant as the common house fly, swarming in shops, houses and kitchens, wherever sweets are exposed or there is anything else on which it can feed. Probably great care was taken to import no hives in which the *bee moth* had a lurking place, and this very precaution has shown that although the latter is execrated here as a foe that must be driven out, it yet subserves a most useful purpose in our protection, and that until it finds its way to the Pacific Coast the bee itself may still continue to be regarded as rather a plague than a blessing.

So much for Dr. Fitch's theory. He was led last year to make extensive observations in the fields of wheat through the north-eastern part of this State and the adjoining portion of Vermont. And he found so very few heads of wheat any where, in which there was a trace of the midge to be seen, that he considers it to have abdicated in that region, at least temporarily. He argues consequently, that throughout the section of country referred to, *farmers need have no fear of sowing this year all the spring grain they choose.* While we do not understand him as asserting that the midge will *never* return to it, we do understand that he considers himself safe in speaking for the season of 1861. We trust that the result will vindicate (as we doubt not it will) the correctness of his position.

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☞ At the Annual Meeting of our State Agricultural Society, a resolution was adopted calling the attention of American Manufacturers of Agricultural Machinery, &c., to the contemplated Exhibition of the Industry of all Nations to be held at London next year.

The corresponding "World's Fair" in 1851 did much to acquaint European Nations with our implements and machines. Many of them are doubtless calculated to compete to advantage on the Continent and in the Colonies, with those of English manufacture. And it is to be hoped that our manufacturers will not allow the coming opportunity to escape them, of representing abroad fairly and completely whatever progress we may have made during the past ten years, in this department of effort.

We are reminded of the subject at present, in reading Count de Gourcy's Account of his last Agricultural Tour in Northern Germany, Holland and Belgium. At the Agricultural School at Proskau in Silesia he found an American plow "with changeable mould-board," which, with several English implements, "came from the London exhibition of 1851;" at Zierow in Mecklenburg, the Baron de Biel had had a Hussey's Harvester "since the London exhibition," and M. de Behr, near Namur, was using American plows and a McCormick Reaper, with which he appeared well satisfied; in Holland, a "New-York plow" is spoken of at Wilhelmina-dorp; at Annaberg near Bonn, he visited a proprietor who had imported from America "excellent plows" and other tools, together with axes, and another who was using an American thrashing machine, which he had also met with before "in the possession of several cultivators along the Rhine," and he speaks of seeing another and different one afterwards. Mention is made of these things casually, and in several cases with direct reference to the great London Exhibition. When repeated in 1862, we cannot doubt that it will attract a still larger number of enlightened agriculturists among the crowds of visitors who will throng there from every civilized country in the world; and they will come this time, not, as they probably did before, entirely without the hope of finding anything worth their attention in the American department and its agricultural contributions.

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Warning against an Imposter.—About the middle of February, we received a note from an establishment at Green Point, Long Island, stating that the proprietors had been visited six weeks or two months previously, by a person representing himself to be "the son of Luther Tucker," and the one mentioned in our firm, and that in consequence of these representations he had succeeded in obtaining "five dollars, as he was short of funds, which he was to return as soon as he reached home." We replied at once to say that the whole thing was a bold imposture, and requested farther particulars. The nature of the reply is such that we consider it our duty to present thus publicly a warning against any farther efforts of the same sort to which this rascal's past success may lead him. He not only "seemed to be minutely familiar" with our office and business—a familiarity which must have been manufactured entirely "out of whole cloth"—but also "with all the particulars relative to the State Agricultural Society and the leading men in it, and *showed bills for collection against different parties*" in favor of our firm, and "said he had remitted home a day or two before all his money but about $20" which he had just lost, and wanted to borrow $5 to get home with.

"In his appearance, he was genteel, well dressed, would weigh about 140, height 5 ft. 8 or nine inches, dark hair, rather a round smooth face, a little florid and no whiskers or moustaches."

We have given these particulars at so much length, from the fear that the attempt may be renewed hereafter, and in order that readers may be guarded against the appearance of the imposter and his mode of procedure. It may be added that we are not in the habit of collecting bills, except through the mails, and that consequently any one pretending to have such bills from us may be set down as an imposter unless there is personal or indisputable evidence to the contrary.

P. S. Since the above was written, we hear of a similar imposture in New-York—the rascal this time passing himself off as an employee at the State Ag. Society's rooms.

◆

☞ We are indebted to Mr. Wm. Ingell of Oswego county for a sample of Cauliflower Seed of which Mr. I. says: "It is the earliest and best I ever saw—start the plants the 1st April in a hot-bed and cultivate in rich soil and you can have good sized heads the fore part of July." Mr. I. labels this seed the "American Cauliflower."

☞ A subscriber in Indiana, says, in a late letter—"I certainly deem your Country Gentleman the Napoleon of agricultural publications."

☞ Does imported blood degenerate on this side the Atlantic? Are our men punier and more hatchet-faced, and our women sallower and slimmer, than their English ancestors or contemporaries? Do our horses become more sluggish and less powerful—our cattle tenderer and more diminutive,—our sheep smaller and bonier, less juicy as to chops of lamb, less weighty as to saddle of mutton? Will the preternatural legginess of Shanghai and Brahma be stunted in the free atmosphere of a republic; and the obese swine of Yorkshire, or Suffolk, or Windsor, shall they the less weigh down their little pegs with vast rotundity of superstructure for pork-barrel and smoking-room?

Perhaps it would be difficult to answer all these questions with the same Yes or No. Perhaps we should suffer, and perhaps not, in the comparative human avoirdupois of the United States and Great Britain; for there are slim Cockneys as well as fleshless Yankees, and tall and portly Kentuckians as well as short and thick John Bulls. Perhaps our roadsters and racers had better retire from the field,—yet there are occasional exportations of the former for Imperial service, and Mr. Tenbrook we believe has not entirely given up the contest as regards the latter. Perhaps our Short-Horns had better be counted out—we can tell better when we know whether Mr. Thorne's bulls which soon go over to English hirers, ever re-cross the water to Occidental shores. And so of South-Downs, and Shanghais, and Suffolks—whether we are to improve or deteriorate the type received by our importers from foreign sources, may be a question of time, even with the utmost effort on the part of those who breed them, and the most liberal encouragement on the part of a large and intelligent farming community.

Our State Agricultural Society has long deemed it a leading object to encourage the importation of Foreign Cattle. It has done so by placing them in separate classes at its exhibitions, from those of home breeding—partly in order especially to secure a full representation of imported stock by offering prizes, some one or other of which anything imported has been almost sure to win,—and, partly, for the protection of home-breeders against competition, in the common presumption that competition with imported blood could not be otherwise than to their disadvantage.

But we have now turned a corner, so far as Cattle are concerned. It was proposed by several members of last year's Executive Board, to omit the Imported Classes as distinguished from those of home-breeding, and to offer one set of prizes only in all the different breeds, Short-Horn, Hereford, Devon, Ayrshire, and Alderney, in which Native Americans shall stand an even chance with the latest arrivals from Great Britain. It was considered inexpedient to make the change too abruptly. Those who have read the report of our recent Annual Meeting, will have discovered, however, that the propriety of the procedure was there referred to, and its adoption in the next prize list, finally resolved upon.

This is a move that a few years ago would have excited great attention. But now it scarcely elicited a word of discussion; and since the meeting, several weeks having already elapsed, nobody seems yet to have found out that the change was made, although duly and distinctly announced. We have deferred any comment ourselves, with the view of awaiting comments from others; as none have come, we conclude that breeders here are quite satisfied to compete with imported stock. There is one thing, at least, very certain, that we ought to import nothing that would be unwilling to compete with what we can breed; and it has been for several years our own view of the case, that it would be far more likely to strengthen than to weaken the position of our best herds, to show that they were not afraid to stand side by side with those of the land from which their progenitors originally came.

☞ We have received from the American Hydropult Co., New-York, one of this most useful and convenient instruments for sprinkling water, or throwing a jet either upon trees or plants, or in case of fire, or for window washing, or for any similar purpose. The very high commendation which Dr. Fitch and others who have tried the Hydropult, accord to it so freely, induces us to ask general attention to the advertisement of it in another column, and to second Dr. F.'s recent proposition that all our readers who have any occasion for its use, (and who, in the country, has not?) should avail themselves of the opportunity of trying the present invention.

The Illustraten Horse Doctor: Being an Accurate and Detailed Account of the Various Diseases to which the Equine Race are Subjected; together with the Latest Mode of Treatment, and all the Requisite Prescriptions, written in Plain English. By Edward Mayhew, M. R. C. V. S., &c., &c. New-York: D. Appleton & Co.

This is not a treatise on the breeding and training of Horses, nor on their general management,—but simply what its title page specifies,—*a Horse Doctor*, comprising full details as to the Diseases and Accidents to which all the various organs of the animal are liable, amply illustrated, plainly described, and accompanied by the best and simplest prescriptions which the author's experience can furnish. Numerous cruelties, practiced by the English grooms upon their charges, which, we sincerely trust are as yet unknown in this country, are exposed and reprobated. Cruelty of other sorts, however, may not be uncommon, and Mr. Mayhew proves that it is everywhere "a very extravagant indulgence," when regarded merely from a pecuniary point of view. The volume forms a handsome octavo of 536 pages, and contains more than 400 engravings which will be wholly new to the American reader. Price $2.50. We shall probably be able, hereafter, to present some extracts as samples of Dr. Mayhew's style and prescriptions.

How Plants Grow.—A Simple Introduction to Structural Botany. With a Popular Flora, or an Arrangement and Description of Common Plants, both Wild and Cultivated. Illustrated by 500 Wood Engravings. By Asa Gray, M. D. Fifth Edition. New-York: Ivison, Phinney & Co., 48 & 50 Walker St.

This little work is the most complete and attractive with which we are acquainted, as an introduction to the science of which it treats. Dr. Gray is Professor of Natural History in Harvard University, and is known as an authority upon Botanical subjects, while, as a writer, his style is both clear and concise, his method is thoroughly systematized, and the illustrations prepared for his several text-books are so numerous and well executed as to impress at once upon the eye exactly the meaning of the thing or term that is illustrated.

Of the volume before us, which is designed to open the way, either in the family or public school, for the use of larger treatises,—there are 104 pages and 229 engravings, devoted to "the general plan of the plant and the way it grows; the parts plants consist of, their uses, general forms, and the names used to distinguish them"—thus comprising the structure of plants, their propagation, purposes and classification. The remainder, 128 pages and 287 engravings more, includes what is termed "a popular Flora" on the title page, together with a dictionary of terms, and a full index of the whole. [Price 75 cents.]

☞ The wonderful labor devoted by the scientific men of Great Britain to the investigation of scientific questions, is illustrated in a paper lately contributed to the *Philosophical Transactions* by John Bennett Lawes, Esq., and Dr. J. H. Gilbert, entitled "An Experimental Inquiry into the Composition of some of the Animals Fed and Slaughtered as Human Food." The record of the experiments described fills nearly 200 large quarto pages, including 64 tables in figures of the results of the various trials, analyses, &c. Our thanks are due to the Authors for a copy, just received by the attention of Dr. Evan Pugh of the Pennsylvania Agricultural College, which we shall examine with great interest, and perhaps endeavor, at a later day, to share with our readers the results of the examination. The inquiry undertaken is one of great interest not only directly to the Farmer, but not less materially to the chemist and physiologist.

Agricultural Exhibitions.—The State Fair of Kentucky is to be held at Louisville, Sept. 17–21; that of Iowa at Iowa City, Sept. 24–27; the Show of the Wisconsin Ag. and Mech. Association at Milwaukee, commencing Sept. 2.

☞ The New-York State Agricultural Society will hold its next Annual Cattle Show and Fair at Watertown September 17, 18, 19 and 20.

In announcing this as the result of the session of the Executive Committee at Syracuse last week, we may mention, as evidence of the spirit with which Northern New-York enters upon the undertaking, and of the value which those capable of judging, place upon our State Fairs as means of drawing out the people—the fact, that the Railroads passing through Watertown, alone contribute the sum of *two thousand dollars* toward the expenses of erections, &c. The Erie railroad gave $1,500 at Elmira last year—we doubt not that in both cases, the investment is one productive of far more than a four-fold return.

The time of the Fair, it will be noticed, is a fortnight earlier than has been customary for many years past,—partly owing to the fact that we are going northwardly, and partly in order to strike upon a week in which, according to numerous meteorological tables kept in that vicinity and extending over a long period of time, there is less likelihood of rain than in any other during the Autumn season.

New railroad connections have been opened since the last Watertown Fair, and this, together with the change in time, and the earnestness manifested by the citizens of the place and the farmers of that and adjoining counties, leads us to regard the prospect as now most encouraging for one of the best and largest exhibitions this State has ever seen.

Plan of House.—Our correspondent, Dr. W. B. of Eudora, Kansas, who wishes a plan of a house combining on one floor, parlor, dining-room, bed-room, library, pantry and entrance hall to the principal rooms, will probably find a plan to suit him on p. 54, 2d vol. of Rural Affairs, (or Register for 1858,) or one of the three plans on pp. 242–3 and 4 of first volume of Rural Affairs, (Register 1857.)

Tomato Vinegar.—Mr. W. A. Carpenter of Hudson, has left at our office a bottle of vinegar, made from the pure juice of the tomato, without the admixture of any other ingredient. The juice was pressed out in the fall of 1859, and left to stand in the tub for some days, when the thick scum which had risen upon it was removed, and a barrel filled with the liquid, which was only recently opened, when it was found to equal the best cider vinegar.

Keeping Apples over Winter.—Mr. Isaiah Whitney of Harvard, Mass., who described his apple cellar in The Cultivator some years since, writes us as follows: "That apple cellar still flourishes—200 barrels now in store. Last spring's stock consisted of 100 barrels, equally divided in No. 1 and No. 2, for which the New-York market gave me a margin of $5.35 to $5.75. Gross receipts nearly $600."

Reclaimed Bog on the Adams Farm. — Mr. C. A. Spear, the tenant of the farm on which stands the mansion in which the two President Adams were born, has, according to a Report in the Norfolk Co. Ag. Transactions, made some expensive and yet profitable improvements. "On some boggy and wet lands," says the report "which were formerly actually worthless, so far as regards the production of a crop, he has expended $100 per acre in draining and covering with earth—mostly gravel—yet it has for five years paid the interest of more than $200 an acre. It has produced an average of more than three tons, (at two cuttings,) of good hay to the acre, each season. The produce of the farm is converted chiefly into milk."

Oats on Fall-Plowed Greensward.—In a notice of Prof. Tanner's Prize Essay on the "Mechanical Condition of the Soil Favorable for the Growth of Seed," the Genesee Farmer says that Prof. T. recommends plowing up an old sod in the fall and leaving it until seed time in the spring. The winter action of the frost will render such land a most desirable seed-bed for oats—"a soil well charged with vegetable matter, firm beneath, yet easy of penetration for the rooting of the plant, with a surface light and free in its character for the germination of the seed. This firmness of the land for the root must be distinguished from the hardness with which wheat will contend after it has once made a fair growth."

Wheat-Growing in Westchester Co.—In the Co. Gent. of Feb. 7, we published a valuable communication from J. T. T.—(it was printed J. *F.* T.)—giving an account of some of his farming operations in the town of Rye, near New-York. In a late letter, J. T. T. says:

"I harvested a crop of winter wheat last summer, on seven and a half acres of land, at an average yield of thirty-three bushels and five quarts per acre, weighing 63½ lbs. per bushel. I followed it with a crop of buckwheat, the yield of which was thirty-one bushels per acre. I then ran one of Shares' Coulter Harrows over the ground, without plowing, and sowed with rye. The results perhaps you will learn another time. By the way, should not our farmers sow their wheat on sod ground, and then follow with corn, in lieu of planting corn on sod ground and following with wheat? I think they should, and believe substantial reasons can be given. What say the wheat-growers? My success has been on sod ground."

The Principles, and Practice of Land Drainage: Embracing a Brief History of Underdraining; a Detailed Examination of its Operation and Advantages; a Description of Various kinds of Drains, with Practical Directions for their Construction, the Manufacture of Drain Tile, &c. Illustrated by nearly 100 Engravings. By John H. Klippart, author of the "Wheat Plant," Corresponding Secretary of the Ohio State Board of Agriculture, &c., Cincinnati: Robert Clarke & Co.

We acknowledge the receipt of a copy of this new Volume from the Publishers, and may notice it hereafter, upon farther opportunities of examination. Judging from hastily turning over its pages, the title page copied above presents a very fair summary of the Author's design—his main object, apparently, having been to present such a compilation of the writings of others upon the different points therein specified, as he thought best calculated to aid the Farmers of Ohio in determining upon the expediency of draining their lands, and in carrying out the project, when determined upon, to the best advantage. [454 pp.—price $1.25.]

What is a Fair Butter Yield per Cow?—A correspondent of the Country Gentleman in a fine Dairy region, after alluding to the instances of large production from well-bred cows, noticed now and then in different dairies—such for example as the Ayrshire heifer, mentioned in our letter from Unadilla—adds the following sensible remark: "I really wish our Dairy farmers could be made to understand and appreciate such stubborn facts, and not attribute *everything* to feed and care, or to the still more foolish notion, that it is all 'because Mr. So-and-so owns the animal,' while in his hands she would be no better than any other. In my opinion, our Dairymen should not be content with less than 200 lbs. yield of butter from a cow, feeling that anything short of this is just so much less than a fair *crop*, so to speak, from the dairy."

☞ It is stated that his Royal Highness, the Prince of Wales, has lately sent over "two fine buck sheep for Mayor Wentworth of Chicago, and two very fine pointer dogs for Mr. Spencer of the Chicago, Alton and St. Louis Railroad. When at Chicago, Mayor W. took the Prince to his farm, and showed him some fine stock he had got from "the old man" (Prince Albert) which greatly amused the Prince. With Mr. Spencer he went with his suite on a shooting trip on the prairies, and was handsomely entertained at his residence. Hence, probably, the presents."

☞ We organized an Ag. Society on the 5th of Jan., 1861, called the "Adams Co. Ag. Society," and have a charter—meet every two weeks in the afternoon, for interchange of opinion on all subjects connected with Agriculture. The names of the officers are—Prest., John Burkhelder—Vice Prests., Jacob Titzer and Wm. Walkay—Rec. Sec'y, George Wilson—Cor. Sec'y, Wm. B. Wilson—Treasurer, Barnet Myers. We propose holding an Ag. Fair this fall. W. B. W.

☞ The Mark Lane Express, just received, under date of the 18th ult., devotes great space to extended Reports upon the results of the Crops of 1860, and the prospect of the Wheat Crop of 1861. These Reports come from different parts of each County in England, and number upwards of *three hundred*,—so that, as will be readily understood, they must show very fairly the exact condition of the whole country at present, with regard to the points under consideration. "Both in respect to Cereal and Root crops," says the editorial abstract, "the past year has been calamitous for the farmer, as well as to the country at large."

"A vast amount of human food, as well as that for cattle, has been destroyed by weather such as we have had no parallel since 1816. This alone, notwithstanding the largest importations ever realized, fully accounts for the present high range of agricultural produce.

"A still more important fact is also elicited by these reports, relative to the breadth of land sown hitherto with wheat for the next crop. This appears to be quite as deficient as in the memorable autumn and winter of 1852-53, and probably more so. If the next two months should prove unfavorable to the spring sowing, the land will be laid down with other grain than wheat. Fears, too, are entertained that a large proportion of the wheat already sown will not vegetate, or has been destroyed by the frost, in consequence of its weak state from late sowing and the immature condition of the seed. There is consequently the fear of a deficient harvest next season, which it will be well for those who are more immediately concerned to keep in view, and to watch with vigilant attention the influence of the rising year upon the growing crop."

The weather of the coming spring in England, will therefore be watched with scarcely less care than that of last autumn, when her grain fields were again and again prostrated by storms, and her harvests exposed so long and so destructively. There seems to be no reason for doubt that all the breadstuffs we can spare will find a market, and the opening of navigation, now close at hand, will probably witness great activity in their shipment from the interior to the seaboard.

—Shall we be wrong in advising our farmers to sow largely this spring of the different grains? It is scarcely to be anticipated that we shall have, over so wide an extent of country, and with so few drawbacks upon production, a second season like that of 1860: if we do not, with as large a breadth under the cereals, we shall yet, in all probability, have considerable to export; while, if we should, will not the farmer who has the more grain to dispose of, be so much the better prepared to bear an unremunerative price?

CHOICE GRAPES.—For $5 I will deliver at the Express Office in Lyons, the following well grown Grapevines, securely packed: 1 OPORTO, 1 Hartford Prolific, 1 Concord, 1 Union Village, 1 Clinton, 2 Isabellas, 1 Catawba; also 12 Doolittle Black Cap, and 12 Lawtons. Send for Circular of Lyons Nursery.
March 21—w3tm1t. E. WARE SYLVESTER, Lyons, N. Y.

R. L. ALLEN'S MANIPULATED GUANO.

This is a mixture of Peruvian and the choicest American Guano. The first contains a large proportion of Ammonia, and the latter a large proportion of soluble Phosphates, both of the highest importance to rapid germination and large crops. The combination of the above elements is just what is required to make a universal fertilizer. Any one can make this mixture for himself. But there are so many qualities of the American, and the Peruvian is so FREQUENTLY ADULTERATED in the hands of small dealers, and there is besides the expense and trouble in mixing in small quantities, that it is deemed an object to make A STANDARD ARTICLE of a PERFECTLY RELIABLE QUALITY, and offer this at a price predicated upon the proportions of each kind of guano used. $45 CASH per ton of 2,000 lbs., in barrels or bags. If for immediate use, it may be packed in bags, containing about 150 lbs. each; if to be kept for some time, the American Guano will rot the bags, and barrels should be used.

R. L. ALLEN,
Feb. 28--weow2tm2t--Apl 4--w1t. 189 & 191 Water-st., New-York.

I. T. GRANT'S PATENT DOUBLE BLAST FAN MILLS.

They will chaff and screen wheat in passing through the mill once, in the most perfect manner, and all kinds of grain and seed. Warranted the very best in use.

Patent Rights for sale of all the Western States.
Address I. T. GRANT & CO.,
May 1—m12t Junction, Rensselaer Co., N. Y.

NO. 1 PERUVIAN GUANO.—Warranted Pure.
Superphosphate of Lime,
Pure Ground Bone, Land Plaster,
Lodi Manufact'g Company's Poudrette, &c.
Sold at the North River Agricultural Warehouse,
GRIFFING BROTHER & CO., Proprietors,
Jan. 1—m4t. 60 Courtlandt Street, New-York City.

GREAT AUSTIN SHAKER STRAWBERRY.

The price of this mammoth variety will be reduced this spring to $2 per dozen, or $10 per hundred. Delivered in rotation as ordered. The Great Austin was exhibited last year in Boston, New-York, Philadelphia, Rochester and Albany, and acknowledged to be the most beautiful, and to average the largest and most productive of any strawberry in cultivation. A liberal discount to those that purchase by the thousand. Orders addressed to either

CHAUNCY MILLER, Shaker Trustee, Albany, N. Y., or
WM. S. CARPENTER, 468 Pearl-Street, New-York.
March 28—w4tm1t.

STUMP AND ROCK PULLERS.

Hall's Hand Stump Pullers, price,	$60.00
Willis' Power Stump Pullers, small size,	150.00
do. do, largest size,	225.00
Lyon's Hand Stump and Rock Pullers,	80.00
Bolles' Power on Wheels for Rocks,	230.00

This machine lifts the rocks and transports them where required.
For sale by R. L. ALLEN, 189 & 191 Water-st., New-York.
Feb. 28—weow2tm2t—April 4—w1t.

PERUVIAN GUANO—Government brand and weight.
ICHABOE GUANO.
AMERICAN GUANO.
FISH GUANO.
IMPROVED SUPERPHOSPHATE OF LIME.
BONE DUST, FINE AND COARSE.
LAND PLASTER.
For sale in quantities to suit purchasers. A. LONGETT.
March 1—m3t. No. 34 Cliff-st., New-York.

SEEDLING POTATOES FOR SALE.

I. VARIETIES.—1. GARNET CHILI, red. 2. PINK EYE RUSTY COAT, white. 3. CUZCO, white. These three sorts are all sound, and ripen with the season. The two first are the hardiest sorts known, and yield nearly alike. Third is a little less hardy, but uniformly and everywhere the LARGEST YIELDER I have known. 4. NEW KIDNEY, white. 5. COPPER MINE, copper colored. These two sorts are both a little long and ripen two weeks earlier than Nos. 1, 2, and 3. Though hardy, they are a little less so than Nos. 1 and 2. These five varieties all have white flesh, all GROW CLOSELY in the hill, do not PUSH OUT of the soil, and are SMOOTH, except that No. 3 is deep eyed. They yielded in 1859, in common field culture, from 255 to 372 bushels to the acre.

☞ I have no very early sort that is highly reliable.

II. AGE AND DIFFUSION.—The GARNET CHILI is a seedling of 1853, is now very widely known and prized as a sort adapted to all soils and climates. The others are all Seedlings of 1856, and were first given out in 1860. They too are widely spread, (from Massachusetts to Kansas, and from Missouri to Canada West.) Numerous reports on their culture in 1860, (a season almost everywhere either very wet or very dry,) show a wide adaptation to soil and weather. These reports would indicate (what my home experience justifies) that the PINK EYE RUSTY COAT is nearly or quite equal in all respects to the GARNET CHILI.

III. PRICE.—$3 (three dollars) per barrel of 140 lbs., $1.50 per bush., $1 per half bushel, and 50 cents per peck, CASH IN ADVANCE. The larger price is charged for the smaller quanties from the proportionably greater cost of packing and delivery.

IV. TRANSMISSION.—They will be forwarded by railroad, canal or express, as shall be directed. The sorts will be kept distinct, and the packages carefully directed. The sorts will be described in a printed sale bill, with directions for potato culture, which will be forwarded by mail when the potatoes are sent.

☞ Sums of less than $1 may be sent in 3 cent postage stamps.

☞ Should any one wish to get small packages of these five sorts, I will put up two tubers of each and forward by Express to those who have previously sent me 30 cents in postage stamps.

☞ In the sales of many years I have had but one package eventually miscarry.

☞ The first of April is as early as potatoes can usually be sent safe from frost, except they go directly south.

CHAUNCEY E. GOODRICH, Utica, N. Y.

REFERENCES.—The Garnet Chili is too widely diffused and too highly appreciated to need testimonials. The other four sorts are favorably known to the following, among many others who have cultivated them the past year: Albert Breese, Hubbardton, Vt., Wm. F. Bassett, Ashfield, B. K. Bliss, Springfield, C. H. Gleason, Holden, all of Massachusetts; C. G. Hazzletine, Cherry Valley, Wm. P. Humphrey, New Rochelle, Wm. F. Ridder, Busti, S. T. Kelsey & Co., Great Valley, Geo. Arkell, Canojaharie, all of New-York. Thos. T. Marther, Jenkintown, E. M. McConnell, New Castle, Wm. S. Gray, Half Moon, P. Sutton, Pittston, Aaron Bomburgh, Harrisburgh, and F. W. Noble, all of Pensplvania. Dr. E. P. DeMarcellin, Spottswood, B. F. Robinson, Goodwinville, and Benj. Shepherd, Greenwich, all of New-Jersey. J. C. Holmes, Lansing, Mich., S. L. Manker, Pontiac, and John Moss, Robin's Nest, Ill., J. Howard McHenry, Baltimore, Md., Yardley Taylor, Loudon Co., Va., and Geo. Buckland, Canada West.
Feb. 21—w3tm1t.

PIANOS, $150!—PIANOS, $150!!

RICH ROSEWOOD CASES---WARRANTED.

Having Rebuilt our Factory we are again Furnishing our

SUPERIOR PIANOS!

ALL PRICES AND STYLES.

Send for DESCRIPTIVE PRICE LISTS and CIRCULARS to
BOARDMAN, GRAY & CO.,
Manufacturers,
Albany, N. Y.
Jan. 3—weow3tm2t.

CHOICE VEGETABLE SEEDS BY MAIL.

The following varieties will be mailed to any address in the Union on receipt of the price affixed, which may be remitted in postage stamps or current bills :

50 Seeds Hubbard Squash,..................	15 cents.
20 do. Honolulu do.	15 do.
50 do. Boston Marrow, pure,.........................	15 do.
50 do. Japan Apple Pie Melon,.........................	15 do.
100 do. Perfection Tomato (Pomo d'oro Lesteriano.).....	15 do.
1 Packet Early Paris Cauliflowers (the best in cultivation,)	25 do.
1 do. Marblehead Mammoth Cabbage (Gregory's,)....	25 do.
½ ounce Stone Mason Cabbage (Gregory's)..............	15 do.
½ do. Premium Flat Dutch Cabbage......	15 do.
1 Packet Lee's New Sprouting Broccoli, (a new English variety,)..	50 do.
1 ounce Yellow Danvers Onion, (the best variety,).......	25 do.

The entire collection will be sent by mail, prepaid, for $2. Cash must always accompany the order.

The above may be relied upon as the very best of their kind in cultivation. Address B. K. BLISS.

March 14—w4tm2t. Springfield, Mass.

OSIER WILLOW CUTTINGS.—The best variety for market and for live fence (Salix purpurea) —price $3 per 1000. By mail, postpaid, for experiment, $1 per 100.

Jan. 17—w16tm4t. D. L. HALSEY, Victory, Cayuga Co., N. Y.

LANDSCAPE GARDENING AND RURAL ARCHITECTURE—Landscape, Agricultural and Civil Engineering, Surveying, Leveling and Draughting.

GEO. E. WOODWARD,

Architect, Civil Engineer & Draughtsman,

No. 29 BROADWAY, NEW-YORK.

Country Seats, Parks, Rural Cemeteries, and public and private roads, laid out and superintended. Plans, Elevations and Working Drawings for Buildings in all departments of Rural Architecture, prepared and mailed to any section of the country. Consultations gratuitous, personally or by letter, March 21—w&mtf.

HIGHLAND NURSERIES, Newburgh, N. Y.

A. SAUL, (successor to the late A. J. Downing & Co.,) has the pleasure of announcing to the patrons of this old establishment, and the public in general, that his stock of

Fruit and Ornamental Trees, Plants, &c.,

for sale for the ensuing spring trade, is full and complete, and comprises everything to be obtained in his line of business, viz :

A large stock of Apple, Pear, Cherry, Plum, Peach, Apricot, Nectarine and Quince trees, 1 to 3 years from the bud, of superior quality and growth. Grapevines, native and foreign, embracing all the new and rare varieties. Gooseberries, Currants, Raspberries, Blackberries and Strawberries, of all the new and old proved varieties. Rhubarb and Asparagus roots do.

ORNAMENTAL TREES.

EVERGREENS.—A large stock of Norway Spruce of all sizes, Balsam Fir, European Silver Fir, Austrian, Scotch and White Pines, Hemlock and American Spruce, Arbor Vitæ, Junipers, (in varieties,) and a great variety of new and rare Conifers from 1 to 5 feet high.

DECIDUOUS TREES of extra size, for street planting, and giving immediate effect to Parks, Lawns, Cemeteries, &c., &c., such as Maples, 8 varieties; Elms, 10 varieties; Ash, 8 varieties; Oaks, 6 varieties: Catalpas, Horse Chestnuts, Ailanthus, Larch, Tulip (true,) Abele, Negundo, Mountain Ash, Deciduous Cypress, Weeping Willows, Lindens, &c., &c.

FLOWERING SHRUBS.—Over 50 choice species and varieties.

ROSES.—A large collection of Hybrid Perpetual, hardy Garden and Moss, China and Tea, &c.

HEDGE PLANTS.—100,000 Osage Orange plants of extra growth, 1 to 3 years old.

The above stock is all of the best quality and growth, and will be sold on the most reasonable terms.

A new Catalogue will be ready about the middle of March, and will be sent to all applicants enclosing a P. O. Stamp to prepay the same.

A. SAUL, Highland Nurseries,

March 7—w&m1t. Newburgh, N. Y.

SHORT—HORNS.

I offer for sale two Duke of Oxford BULL CALVES, one of them got by the "Duke of Gloster," (11382,) the other by imported "Grand Duke of Oxford," (16184.)

Also several well bred Bull and Heifer Calves by the same sire.

I have also a few

JERSEY OR ALDERNEY

Cows and Heifers for sale. JAMES O. SHELDON,

Jan. 24—w&mtf. White Spring Farm, Geneva, N. Y.

THOS. WOOD continues to ship to any part of the Union, his celebrated PREMIUM CHESTER CO. WHITE HOGS, in pairs not akin, at reasonable terms. Address.

Jan. 10—w&m1y. PENNINGTONVILLE, Chester Co., Pa.

EXTRACT OF TOBACCO.—For dipping Sheep and Lambs, and for destroying all kinds of Vermin on other animals.

The manufacturers of this new and valuable preparation, beg leave to call the attention of Farmers and Graziers to this effectual remedy for destroying Ticks, Lice, and all other insects injurious to animals and vegetation, and preventing the alarming attacks of the Fly and Scab on Sheep.

Its use not only removes the vermin on animals but cleanses and purifies the skin, thereby materially benefitting their general health, and greatly improving wool, both in quality and quantity.

This article completely supersedes that LABORIOUS and DISAGREEABLE work of preparation in your own buildings for sheep-washing, as it is ready at all times, in any climate, and for all descriptions of Sheep, even for Ewes in lamb, and can be furnished at a reduced cost.

FISHER & CO., Sole Agents.

March 14—w&m3mos. 23 Central Wharf, Boston.

BLACK HAWK STALLIONS FOR SALE.

HERO.—Nine years old, 15 hands high, coal black and very fast. Got by "Hill's" "Old Vermont Black Hawk." Dam by "Sherman Morgan." Grand-dam by "Membrino." Price, $1200.

KENTUCKY HAWK.—Six years old, 15 hands high, dark chestnut and very handsome, has trotted in 2:48. Got by "Hero," dam half sister to the celebrated pacing mare "Pocahontas," got by "Cadmus," and out of a thorough-bred mare. Price, $1,000.

CAYUGA HAWK—Four years old, 15¼ hands high, rich sorrel, has trotted in 3:10, on an eighty rod track, without training, and bids fair to out foot "Kentucky," his full brother. Price, $1,000. If not sold by the 1st of May, "Hero" will be rented for the season or on shares to any one giving proper security. Full particulars and pedigrees furnished by addressing

THOMAS GOULD, Aurora, Cayuga Lake, N. Y.

March 21—w4m2t.

THOROUGH-BRED NORTH DEVONS FOR SALE.—Annette, (1151,) 3d vol. Devon Herd Book, cow and sire both imported. In calf by an imported bull.

Also yearling and 2 year old Bulls, Heifers and Heifer Calves.

ALFRED M. TREDWELL,

March 14—w2tm1t. Madison, Morris Co., N. J.

MISSOURI FARMS.—THE HANNIBAL & ST. JOSEPH R. R. COMPANY offers for sale

Over 500,000 Acres in Northern Missouri,

Of the finest Prairie and Timber Farming Lands in the West, in Lots to suit Purchasers, at low Prices, on the long Credit of Ten Years, at Five Per Cent Interest, Pamphlets, Circulars and Maps, giving full and reliable information on the Climate and its healthfulness, Soil, Water, Timber, Coal, Rock, Productions, Markets, &c., can be had gratuitously on application by letter or otherwise, to

GEO. S. HARRIS, Eastern Land Agent,
40 State Street, Boston, Mass., or to
JOSIAH HUNT, Land Commissioner,
of the H. & St. J. R. R., Hannibal, Mo.

☞ The undersigned continues to act as Agent of the NEW-ENGLAND COLONY TO MISSOURI, and will furnish all desired information of this promising enterprise. Address

Mar. 14—w4tm1t. GEO. S. HARRIS, Boston, Mass.

SHORT-HORN BULLS FOR SALE.

The subscriber offers for sale four Short-Horn Bulls, all of fine size and symmetry ; three of them are out of imported cows by imported or the get of imported bulls of Bates stock, and the other by an imported Bull, out of a cow of the Princess stock :

DUKE OF RUTLAND—white, calved June 6, 1859; got by Duke of Cornwall, 2757, out of imported cow Famous, by Mr. Bates' Earl Derby, (10177,) &c., &c.

DUKE OF CHESTER—roan; calved Aug. 28, 1859; got by imported Duke of Portland, 1482, out of imported Lady Liverpool by Mr. Bates' 3d Duke of York, (10,166,) &c., &c.

BEDFORD—white: calved Sept. 9, 1859; got by imported Duke of Portland, 1482, out of Duchess of Exeter, by imported Duke of Exeter (10152,) &c., &c.

DUKE OF RICHMOND—red; calved Oct. 6, 1860, got by imported Duke of Portland, 1482, out of imported Alice Maud, by Grand Duke, (10284,) &c., &c. Address Dr. HERMAN WENDELL,

March 14—w&mtf. Hazelwood, Albany, N. Y.

TO FARMERS—80,000 Barrels Poudrette of

The Lodi Manufacturing Company,

For sale in lots to suit purchasers, at $2 per bbl. under 7 bbls., or $1.50 per bbl. for 7 bbls. and over. This is the CHEAPEST FERTILIZER in market; $3.00 worth will manure an acre of corn, and will

Increase the crop from one-third to one-half,

and will ripen the crop about two weeks earlier. A pamphlet with satisfactory evidence and full particulars, will be sent gratis to any one sending address to GRIFFING BRO. & CO.,

General Agents for U. States, 60 Cortland Street, N. Y.

Jan. 24—w12t—m3t.

STEEL PLOWS.

We are now manufacturing a superior **Steel Plow,** intended for general use. Some of the advantages it possesses over the cast iron plow, are lightness of draught, durability, and freedom from clogging or sticking in heavy, clayey sticky or tenacious soils. The parts most exposed to wear are so constructed that they may be readily repaired by any blacksmith.

We would refer to the following persons who have them in use: John Johnston, Geneva, N. Y.; Wm. Summer, Pomaria, S. C.; R. C. Ellis, Lyons, N. Y.; Col. A. J. Summer, Long Swamp, Florida; A. J. Bowman, Utica, N. Y.; A. Bradley, Mankato, Minnesota; A. L. Fish, Litchfield, N. Y.; Volney Owen, Union, Ill.; John Slighter, French Creek, N. Y.

"Mohawk Valley Clipper," No. 1, full trimmed, all steel,..	$15.00
do. do. with cast point,................	14.00
"Empire," No. 1, with cast point, full trimmed,............	15.00
For Three-Horse Plows,....................	$1.50 extra.
For Adjustable Beams, ...	1.00 do.

We also manufacture Sayre & Klink's Patent Tubular Shank

STEEL CULTIVATOR TEETH.

These Teeth are intended to supersede the old style of wedge teeth and teeth with cast iron heads. They are not liable to become LOOSE in the frame, like the FORMER, nor to BREAK, like the LATTER. They are as readily attached to the frame as any form of tooth.

SAYRES' PATENT HORSE HOE.

This implement is considered to be superior to any other for cultivating Corn, Cotton, Tobacco, Potatoes, Hops, Broom Corn, Nurseries, and all crops planted in rows or drills.

Steel Shovel Blades and Cultivator Points made, and all kinds of Swaging and Plow work done to order.

☞ SEND FOR A CIRCULAR. ☜

REMINGTONS, MARKHAM & CO.,
Ilion, Herkimer Co., N. Y.

E. Remington & Sons,
Benjamin P. Markham,
Geo. Tuckerman.

March 21—w&mtf.

ONE HUNDRED VARIETIES OF GRAPEVINES,

For sale cheap. Catalogues mailed free. Address
W. C. LOOMIS,
March 21—w&m1t.* Lowell, Oneida Co., N. Y.

SELECT LIST OF STRAWBERRIES.—

10 VARIETIES AND 1,000 PLANTS FOR $10.

For $10 we will furnish 100 plants each of the following choice kinds: Triomphe de Gand, Trollope's Victoria, Vicomtesse Hericart de Thury, Filmore, British Queen, Burr's New Pine, Jenny Lind, Hooker, M'Avoy's Superior and Wilson's Albany.

5 VARIETIES AND 500 PLANTS FOR $5.

For $5 we will furnish 100 plants each of the following kinds: Triomphe de Gand, Trollope's Victoria, Burr's New Pine, Jenny Lind and Wilson's Albany.

STRAWBERRY PLANTS BY MAIL.

For $1 we will send to any Post Office address in the country, postpaid, and carefully put up in cotton and oiled silk, so as to carry safely 25 good plants of the Wilson's Albany. We will send, for the same price, the same number of plants (25) of any variety offered in our catalogue, at 25 cents per dozen.

For $1 we will send 20 plants of the Triomphe de Gand, or any other variety we offer at 50 cents per dozen. No order filled for plants by mail, for less than one dollar's worth of any one kind.

RASPBERRIES.

Our stock of Plants is very large and fine. We have over twenty varieties, including Brinckle's Orange, at $1 per dozen; $5 per 100; Franconia, at 75 cents per dozen; $4 per 100; Fastolff, River's Large Fruited Monthly, Knevett's Giant, Hudson River Antwerp, Red and Yellow Antwerp and others, at 75 cents per dozen; 3 per 100; Improved American Black Cap, 50 cents per dozen; $3 per 100.

Persons wanting large quantities of the above will be furnished at very low rates.

SELECT LIST OF RASPBERRIES.

For $10 we will furnish 100 Brinckle's Orange, the finest flavored Raspberry, as well as one of the largest, most beautiful and productive.

100 Franconia, a very large red berry, of good flavor, attractive and enormously productive.

100 improved American Black Cap; much larger, more juicy, better flavored, with fewer seed, and ever way superior to the common Black Cap. The plant is entirely hardy and very productive, and the fruit is much sought after in the market.

The above kinds include the three colors—orange, red and black—and furnish a pleasant variety in flavor. We regard them as the best for amateurs, and the most profitable for market culture.

BLACKBERRIES.

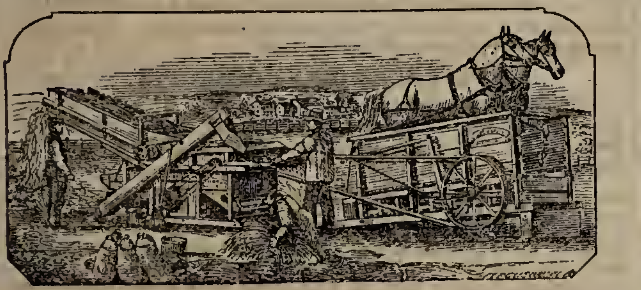
	Per Dozen.	Per 100.
New Rochelle,	$1.00	$5.00
Dorchester,	75	4.00
Newman's Thornless,	75	3.00

For $10 we will send 100 of each of the above kinds.

We have fruited these varieties for five years, and having ten acres in cultivation, we are prepared to furnish wholesale purchasers at the lowest rates.

LOGAN GRAPEVINES.

Having procured a supply of the above early and valuable grape, of A. Thomson, of Delaware, Ohio, will furnish good well-rooted vines at 75 cents each—$7 per dozen; or by mail, securely put up, and postage paid, $1 each. J. KNOX. Lock Box 155, Pittsburgh, Pa.
March 21—w&m1t.



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The subscribers manufacture

Endless Chain Powers, for 1, 2 and 3 Horses.
Four to Ten Horse Lever Powers.
Combined Threshers and Cleaners.
Threshers and Vibrating Separators.
Clover Hullers, Wood Saws, &c.

A full description of which may be found in their Illustrated Circulars, which will be mailed free to all applicants.

The following is a copy of a letter received from a man who purchased, last season, one of our Two-Horse Powers, Thresher and Cleaner.

Osceola, Ill., Feb. 19, 1861.

G. Westinghouse & Co.—We threshed last summer and fall some 10,000 bushels of wheat at 4c. per bushel, and about 4,000 bushels of oats at 2c. The greatest amount of wheat we threshed in one day, was 260 bushels, commencing 9 o'clock, A. M.; but as a general thing averaged 150 to 200 bushels per day, according to the yield per acre. We threshed 530 bushels of oats in one day, and where they were good, averaged about 500 bushels per day. S. M. Hill.

For Circulars or information relating to these machines. Address
G. WESTINGHOUSE & CO.
March 21—w&m1t. Schenectady, N. Y.

ITALIAN BEES AND QUEENS FOR SALE.

For particulars send early for Circular. M. M. BALDRIDGE.
March 14—weow5tm2t. Middleport, Niag. Co., N. Y.

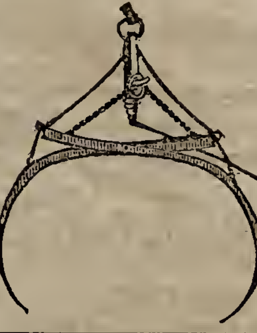
AGRICULTURAL AND HORTICULTURAL

IMPLEMENTS.—A complete assortment of latest approved patterns and best made. Farming Implements, Machines, and Tools, consisting of everything required by the Farmer, Planter, and Gardener.

Also GUANO, BONE DUST, Phosphate, Poudrette, Plaster, &c.

Field, Flower, and Garden SEEDS.

Trees, Plants, and Shrubs, all of reliable quality, and furnished on the most reasonable terms. For sale by R. L. ALLEN,
Feb. 28--weow2tm2t--Apl. 4--w1t. 189 & 191 Water-st., New-York.



BEARDSLEY'S

HAY ELEVATOR

OR

Horse Power Fork,

Can be used by one or two horses.

Price, including three pulleys and 60 feet of rope, $12.

Liberal discount to dealers.
Rights for sale.
Send for a Circular.

LEVI A. BEARDSLEY.
South Edmeston.
April 1—m3t. Otsego Co., N. Y.

GARDEN SEEDS.—

I have now in store a full assortment of Garden, Field, and Flower Seeds, among which will be found all the varieties of Beans, Beet, Cabbage, Carrot, (all American growth.)

CORN—Extra Early Dwarf Sweet, Early Burlington, &c., Cucumber, Lettuce, Melons, Onion, Parsnip.

PEAS—Princess, Lord Raglan, Epps' Monarch, Champion of Scotland, Dwarf Green, Marrow, Daniel O'Rourke, Competitor, Champion of England, all fine varieties.

TOMATOES—Fejce Island, very solid and extra fine, and all other varieties.

TURNIP—American growth and of extra quality. Radish, Asparagus, Spinach, Squash, Salsify, Rhubarb, Rape, Parsley, Artichoke, Broccoli, Cauliflower, Celery, Cress, Corn Salad, Leek, Endive, Kale, Chervil, Collards or Colewort, Brussels Sprouts, Okra, Nasturtium, Mustard, Egg Plant, Pumpkin, Pepper, Scorzonera, Mushroom, Herbs, &c.

TREE AND SHRUB SEEDS of all kinds.

FRUIT SEEDS—Apple, Pear, Quince, Apricot, Blackberry, Cherry, Currant, Gooseberry, Peach, Grape, Nectarine, Raspberry, Strawberry, &c.

BIRD SEEDS—Canary, Hemp, Rape, and Millet.

HEDGES—Honey and Yellow Locust, Buckthorn, Osage Orange, &c.

POTATOES—Ash-Leaf Kidney, Early June, Early Dikeman, Peach Blow, Prince Albert, and all other good varieties.

CLOVERS—White Dutch, Lucern, Red Alsyke, Scarlet, &c.

GRASSES—Red Top, Timothy, Creeping Bent, Tall Oat, Green Grass, (best for lawns,) Orchard, Ray, Foul Meadow, Kentucky Blue, Sweet Vernal, Hungarian, Saintfoin, Fescue, Foxtail, Fine Mixed Lawn, &c., &c.

SPRING WHEAT—Tea, Black Sea, Golden Drop.

SPRING RYE, SPRING VETCHES, SEED BARLEY.

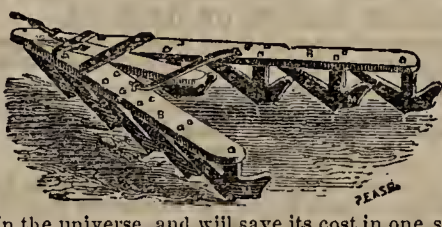
SEED OATS, Scotch and American, extra heavy and clean.

FRUIT, ORNAMENTAL TREES, SHRUBS, and EVERGREENS, and all kinds of plants furnished to order, carefully packed, from the best nurseries and conservatories in the United States.

I take especial care to see that all my seeds are fresh, and well cleaned, and the very best of the kind, which can be obtained from reliable parties at home and abroad. Orders by mail attended to promptly. Send for a Catalogue. R. L. ALLEN,
Feb. 28--weow2t--m2t.--Apl 4--w1t. 189 & 191 Water-st., New-York.

SHARE'S COULTER HARROW.

Now is the time to send in your orders for this most useful implement. As a Cultivator and Harrow it is unequalled, saving much time and labor, as in once going over it leaves the ground in better condition than three times the same amount of labor with the Scotch or Geddes Harrow. It is the best grain and peas coverer in the universe, and will save its cost in one season for this purpose alone. Circulars containing references sent free on application. Price $15.



A good stock of PLOWS, HARROWS, HAY CUTTERS, SEED SOWERS, CULTIVATORS, &c., as also a full supply of GARDEN and FIELD SEEDS, constantly on hand, and orders will receive prompt attention. Address CHAS. E. PEASE,
84 State-st., Albany, N. Y., Manufactory Tivoli Hollow.
Feb. 28—w4tm2t.

I. T. GRANT & CO., PATENT GRAIN CRADLE.

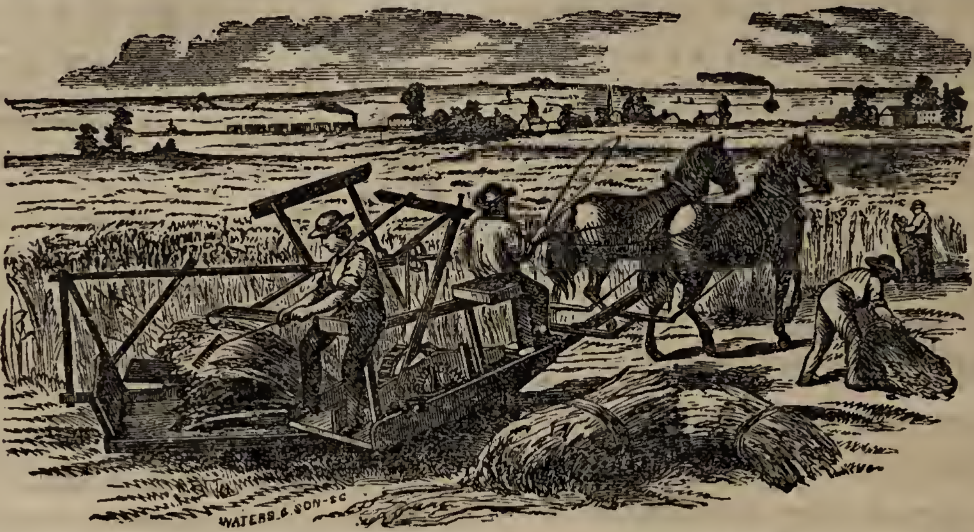
They are so Improved as to be taken down and packed in boxes for transportation. One dozen can be packed in a box of about six cubic feet. We also make the Grapevine Cradle. All of the above are made of the best material and workmanship. For Price List, address
I. T. GRANT & CO.,
May 1—m12t Junction, Rensselaer Co., N. Y.

AGRICULTURAL IMPLEMENTS.—

A large assortment for sale low, to close up consignments.
March 1—m3t. A. LONGETT, 34 Cliff St., New-York.

HOMES FOR THE INDUSTRIOUS

IN THE GARDEN STATE OF THE WEST.



THE ILLINOIS CENTRAL RAILROAD CO., HAVE FOR SALE

1,200,000 ACRES OF RICH FARMING LANDS,

In Tracts of Forty Acres and upward on Long Credit and at Low Prices.

THE attention of the enterprising and industrious portion of the community is directed to the following statements and liberal inducements offered them by the

ILLINOIS CENTRAL RAILROAD COMPANY.

which, as they will perceive, will enable them, by proper energy, perseverance and industry, to provide comfortable homes for themselves and families, with, comparatively speaking, very little capital.

LANDS OF ILLINOIS.

No State in the Valley of the Mississippi offers so great an inducement to the settler as the State of Illinois, There is no portion of the world where all the conditions of climate and soil so admirably combine to produce those two great staples, CORN and WHEAT, as the Prairies of Illinois.

EASTERN AND SOUTHERN MARKETS.

These lands are contiguous to a railroad 700 miles in length, which connects with other roads and navigable lakes and rivers, thus affording an unbroken communication with the Eastern and Southern markets.

RAILROAD SYSTEM OF ILLINOIS.

Over $100,000,000 of private capital have been expended on the railroad system of Illinois. Inasmuch as part of the income from several of these works, with a valuable public fund in lands, go to diminish the State expenses; the TAXES ARE LIGHT, and must consequently every day decrease.

THE STATE DEBT.

The State debt is only $10,106,398 14, *and within the last three years has been reduced* $2,959,746 80, *and we may reasonably expect that in ten years it will become extinct.*

PRESENT POPULATION.

The State is rapidly filing up with population; 868,025 persons having been added since 1850, making the present population 1,723,663, a ratio of 102 per cent. in ten years.

AGRICULTURAL PRODUCTS.

The Agricultural Products of Illinois are greater than those of any other State. The products sent out during the past year exceeded 1,500,000 tons. The wheat crop of 1860 approaches 35,000,000 bushels, while the corn crop yields not less than 140,000,000 bushels.

FERTILITY OF THE SOIL.

Nowhere can the industrious farmer secure such immediate results for his labor as upon these prairie soils, they being composed of a deep rich loam, the fertility of which is unsurpassed by any on the globe.

TO ACTUAL CULTIVATORS.

Since 1854 *the Company have sold* 1,300,000 *acres. They sell only to actual cultivators, and every contract contains an agreement to cultivate. The road has been constructed through these lands at an expense of* $30,000,000. *In* 1850 *the population of forty-nine counties, through which it passes, was only* 335,598 *since which* 479,293 *have been added; making the whole population* 814,891, *a gain of* 143 *per cent.*

EVIDENCES OF PROSPERITY.

As an evidence of the thrift of the people, it may be stated that 600,000 tons of freight, including 8,600,000 bushels of grain, and 250,000 barrels of flour were forwarded over the line last year.

PRICES AND TERMS OF PAYMENT.

The prices of these lands vary from $6 to $25 per acre, according to location, quality, &c. First class farming lands sell for about $10 to $12 per acre; and the relative expense of subduing prairie land as compared with wood land is in the ratio of 1 to 10 in favor of the former. The terms of sale for the bulk of these lands will be

ONE YEAR'S INTEREST IN ADVANCE,

at six per cent per annum, and six interest notes at six per cent., payable respectively in one, two, three, four, five and six years from date of sale; and four notes for principal, payable in four, five, six and seven years from date of sale; the contract stipulating that one-tenth of the tract purchased shall be fenced and cultivated, each and every year, for five years from date of sale, so that at the end of five years one-half shall be fenced and under cultivation.

TWENTY PER CENT. WILL BE DEDUCTED

from the valuation for cash, except the same should be at six dollars per acre, when the cash price will be five dollars

Pamphlets descriptive of the lands, soil, climate, productions, prices, and terms of payment, can be had on application to

J. W. FOSTER, Land Commissioner,
CHICAGO, ILLINOIS.

For the name of the Towns, Villages and Cities situated upon the Illinois Central Railroad, see pages 188, 189 and 190 Appleton's Railway Guide.

THE CULTIVATOR.

THIRD] TO IMPROVE THE SOIL AND THE MIND. [SERIES.

VOL. IX. ALBANY, N. Y., MAY, 1861. No. 5.

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J. J. THOMAS, ASSOCIATE EDITOR, UNION SPRINGS, N. Y.

TERMS—FIFTY CENTS A YEAR.—Ten copies of the CULTIVATOR and Ten of the ANNUAL REGISTER OF RURAL AFFAIRS, with one of each free to the Agent, Five Dollars.

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CULTIVATION OF THE FIELD BEAN.

In England the bean is extensively grown, not so much, however, for human food as for stock feeding, and when its feeding and manurial values are taken into view, it is considered a profitable crop. But the beans usually grown in England, are quite different varieties from the field beans grown in this country. The English varieties grow upon stiff upright stalks, and they are occasionally found in some of our gardens, and known as coffee beans. They have been grown to some extent in this country, but from some cause have not been found so well adapted to our climate as the ordinary crops we cultivate. In England they are grown on strong clayey or stiff loamy clay soils, while our beans succeed best on dry, quick soils. Pound for pound, there is but little difference between the English and American varieties; both contain a larger per centage of nitrogenous compounds, the real muscle forming, strength giving, nutritive matter, than any other vegetable product we cultivate. "There is no vegetable we produce which so nearly supplies the place of animal food as the bean."

Beans freely fed to milch cows increase the quantity of milk, as also the casein, (curd,) the animal principle. Fed to sheep they increase the muscle, wool and milk in much greater proportions than Indian corn; but beans are not so productive of fat when fed to sheep as corn and oil-cake; hence, for stall feeding sheep, the more oily foods, such as corn, oil and cotton-seed cake, are preferable. While to the flock master, whose object is wool and strong healthy lambs, beans and oats are to be preferred.

If the preceding remarks are true, and we have no doubt of their correctness, then it would be for the interest of wool growers to much more extensively cultivate beans as winter provender for their sheep. It will not be necessary for them to raise the choicest varieties of white beans for this purpose, because there are many varieties of large and colored sorts, that are more productive than the high priced "blue pod, or the extra pea bean," which are equally valuable for sheep feeding.

In feeding beans to sheep there seems to be one important advantage, not usually taken into consideration, viz., the increased value of the manure of the bean fed over that derived from the hay and straw fed flock. We will attempt to illustrate this point.

Messrs. Lawes & Gilbert of England, and other scientific men, have pretty accurately determined the comparative money value of cattle and sheep manures derived from the feeding of different foods, such as hay, turnips, oil and cotton-seed cake, peas, beans, &c. These estimates are founded upon the price of good Peruvian guano, say at

$60 per ton. The value of the manure derived from different kinds of food is based upon the amount of ammonia, phosphates and alkalies in the excrements, (solid and liquid,) estimated at the usual prices attributed to these substances in guano and other commercial manures.

Thirty-seven and one-third bushels of beans, at 60 lbs. to the bushel, will weigh a ton of 2,240 pounds. The beans at one dollar per bushel would amount to $37.33. According to the estimates of Messrs. Lawes and others who have carefully investigated these matters, the ammonia, phosphates and alkalies in the excrements derived from a ton of beans, basing the value of the ammonia, &c., upon that contained in guano, amounts to $17.75, which, deducted from $37.33, the cost of beans, leaves the actual cost of them $19.58, or 52 cents per bushel. Boussingault, in his tables of "nutritive equivalents of different kinds of cattle food," estimates 23 pounds of beans equivalent to 100 pounds of English hay. If the value of the manure from beans, and their feeding qualities, as put down by Messrs. Lawes, Gilbert, Boussingault, and others, are practically correct, and doubtless they are nearly so, it is quite evident that it would be profitable for farmers who keep dairy cows and sheep, to cultivate the bean for stock feeding much more extensively than heretofore. They can be best grown on light, easily worked soils, and require but little manure for the production of fair crops. For this purpose the earliest varieties, having reference to their productiveness, should be selected for field culture.

But beans are frequently a profitable crop to grow for market, if the best varieties are selected for this purpose. It is just as easy to grow a number one as a number three bean for market. It is just as easy for the farmer to grow the "blue pod, the marrow, or the extra pea bean," as it is to raise a mixed medley of white, black, yellow, ring-streaked and speckled. In one case the farmer may obtain two dollars per bushel; in the other 75 cents. There is no exaggeration in the above statements. They have both been verified within our own knowledge within a few weeks past.

Field beans are generally grown on light, dry soils. If planted on rich loamy ones, or if fresh manure is freely used, they are apt to run too much to vine, without a corresponding quantity of seed, and ripen unevenly.

In selecting seed it is a good plan to go into the field just before they are harvested and select those ripening at the same time, avoiding those having a tendency to *vine*. These should be first harvested and kept purposely for seed.

Before planting, all colored ones should be carefully picked out, and none but good sound seed planted. This course has long been practiced by the farmer alluded to, who usually obtains $2 per bushel for his beans. They are purchased at the store for retailing. It usually much increases the crop by using a small quantity of rich compost in the hill at planting time. A small handful of a mixture of hen manure, muck and plaster, or a little guano, usually has a beneficial effect upon the crop. Planted in rows wide enough apart to allow the passage of a cultivator, very much lessens the expense of hoeing. The hills should be about two feet distant.

In some sections of the country, in harvesting them, they are stacked around poles, having the limbs left on the poles a foot or so in length. They remain in these stacks till sufficiently dry for threshing, when they are taken to the barn, threshed and spread to dry.

TREATMENT OF WORN-OUT FARMS.

Sometimes—in fact quite frequently—the occupant of an old farm, finds that his land is less productive than he desires; that, for some reason, every crop is more or less of a failure. He may generally find that reason in the mismanagement of the soil—that it has been under an exhausting course of cropping and tillage, in which little care has been taken to keep up its fertility or restore the elements *used up* in the products removed, and that finally it has become *worn out* in the service of a hard master, who did not understand or could not appreciate the principles upon which depend the productiveness of the soil. At any rate, the course pursued indicates such ignorance or negligence, and it is very certain that such is the usual result.

Now, what course of treatment offers the best remedy in such a case, supposing the farmer would "turn over a new leaf," or that the farm has come into new hands which seek to repair the injury it has suffered, and restore the elements of productiveness exhausted, so that good crops may be the rule and not the exception as heretofore? We shall offer only a few desultory hints on this subject, as it is incidentally the great topic of a large share of the contents of our paper, but we trust these hints may not be without bearing and influence on every interested reader.

In the first place, if it has not already been done, we would divide the farm into fields convenient of access, and suited to the course of cultivation to be pursued. The size and number of the fields would depend on the extent of the farm and the rotation of crops engaged in, but should not exceed the maximum amount of manure available for applying thereto, at least for one year during each rotation.

The second thing in importance and effect, would be to commence the *thorough drainage* of the farm. *Where* to begin, would depend on the "lay of the land" for convenient outlet, the needs of different fields in this respect, and the present value of the product given. If the capital was small, or the result thought problematical, the field requiring the least outlay for drainage might be taken first; but with plentiful means, we should commence with that needing most work, and where the enhancement in value would be at once most apparent from the large increase in products effected.

Thirdly, and of equal importance, perhaps, is the thorough and deep cultivation of the soil. We think it will be difficult to find "a worn-out farm" which has been managed under this system; the culture has been shallow and careless instead. Very often but a few inches of the top-soil has been exhausted, and deeper and thorough cultivation is all that is needed to make the farm productive again. Any one seeking to improve a worn soil should experiment, at least, in deep plowing and subsoiling in connection with other measures of amelioration and enrichment.

Upon a drained and deeply cultivated soil, manure is of largely increased value. For this reason we have placed these operations first on the list. A wet, cold soil must first be made dry and warm before any large increase in product can be looked for. A hard, shallow soil must be rendered deep and mellow before it can hold food for the growth of crops in the best state to assist their productions. Properly drained and worked, it will be but little affected by extremes of drouth or moisture, and the *uncertainty* of a crop always existing on an undrained, shallow soil, will be mainly removed.

Hence, in the fourth place, the great means of great and continued productiveness is *manure*. We must feed the soil if we would have it feed our animals and ourselves. We must return for the valuable commodities it gives us, the refuse remaining from their consumption, or, at least, an amount sufficient to make good the loss. No available resource of fertilizing material should be neglected. The muck-mines should be worked, the stable manures should be carefully managed and saved; nothing which will feed vegetable growth should be allowed to go to waste. Lime, plaster, ashes, bones, etc., are often most profitable applications to the soil, stimulating its dormant elements or preparing them for use,—thus repaying their cost annually for years, and, employed in addition to barnvard and green manures, bring these into more profitable action in the production of the various farm crops.

We may hint, lastly, at the kind of farming to be pursued. It will be most securely and most cheaply managed, if of a mixed character—embracing grain and stock growing—the feeding out upon the farm of considerable portions of its products. In no other way can we conveniently market the crop and retain the manure to feed the soil. By no other method are we so well ensured against the effect of "bad years" which frequently fall on some product or other, to the destruction of all profit therefrom. But we will not farther pursue this topic, but rather commend it to the consideration of our correspondents, especially those experienced in the "treatment of worn-out farms."

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[For the Country Gentleman and Cultivator.]

OATS AND PEAS MIXED FOR FEED.

The winter is now so far advanced that farmers are enabled to determine whether the systems of treatment of their stock which they have pursued, are to be recommend or not—a conclusion which would have been too hastily arrived at had it been formed after the first few weeks of feeding.

Having tried it successfully, we can speak highly of mixed oats and peas for feed. The advantages of this grain spring from considerations having reference, first, to its culture, and second, to its use as feed. By sowing, upon such ground as would do for corn, a mixture of two bushels of oats to one of peas, three bushels to the acre, the peas do not injure the oats by overrunning them before they head out; the crop is easily gathered, and grinds well. Fifty bushels to the acre is a moderate yield, the two grains maintaining in the yield about the same proportion as in the seed sown, the oats gaining a little.

The relative expense of growing this crop, as compared with corn, will appear by a reference to the following estimates, which are deemed fair and reasonable:

FIVE ACRES OF CORN. DR.

To Plowing,	$7.50
Cultivating or harrowing,	4.00
Marking out,	1.50
Seed,	94
Planting,	3.00
Cultivating out, twice,	4.50
Hoeing, once,	5.00
Cutting up,	5.00
Husking,	16.00
Shelling,	5.00
	$52.44

CR.

By 200 bushels Shelled Corn at 50c.,	$100.00	
Fodder,	15.00	
Gross Profit,	$115.00	
Nett,		$62.56

FIVE ACRES OF OATS AND PEAS. DR.

To Plowing,	$7.50
Harrowing,	2.50
Seed,	6.75
Harrowing in,	4.00
Harvesting,	3.75
Threshing,	10.00
	$34.50

CR.

By 250 bushels Oats and Peas at 40c.,	$100.00	
Straw,	10.00	
Gros Profit,	$110.00	
Nett Profit,		$75.50
		62.56
Difference in favor of Oats and Peas,		$12.94

In the foregoing we have not supposed manure to be applied to either crop, and have omitted several items which both should have charged to them in common.

Provided our estimates are correct, we show the oats and peas to be the more profitable crop. Wheat may follow either equally well, but the ground is left earlier, and in cleaner and better condition to plow by the oats and peas, and indeed in these days it is impracticable to sow wheat after corn; while in exhausting effect upon the soil we have failed to discover any practical difference. We have made no account of accidents, to which the corn is much the more liable, such as the ravages of birds, worms, frosts and drouth. The fodder from the stalks of one and the straw of the other, if secured with equal care, properly saved and economically fed, is of nearly equal value in point of fact, but we have made in our estimates a difference of a third.

The comparative value of the two crops for feed may be tested, in the first place, by practical experiment, and secondly, by scientific analysis.

In practice we have found in feeding the two kinds of grain, either whole or ground, an advantage in favor of the oats and peas, arising from its better adaptation to different kinds of stock, or rather to more kinds of stock. It is better for sheep than corn, and the meal upon cut straw is much better suited to horses than corn in any shape, while for cattle and swine, whether fattening or not, there is nothing better than this meal, using weight for weight. The grain mixed as we have suggested, weighs from forty to forty-five pounds to the bushel; the meal a trifle less. Whether intended to be fed ground or unground, the mixture may be made lighter or heavier at pleasure by a common fanning mill, which will readily eliminate either peas or oats. Corn, on the other hand, is not susceptible of this graduation. The quantity to be fed of this mixed grain, cannot be specified, inasmuch as scarcely two farmers agree respecting the proper amount of any grain, each occupying ground somewhere between the Johnstonian and the starving theories. We have known ewes to do exceedingly well upon half a pound a head per day of this grain and nothing else but wheat straw; but they were fed with regularity, warmly stabled, and carefully watered. Winter milch cows thrive upon this meal; and for wintering pigs we prefer it to anything else. Fowls, too, of every description, eat the grain with avidity and the most favorable effects.

An analysis of the constituents of oats and peas and of corn is instructive. The following is one view:

	Corn.	Oats.	Peas.
Albuminous proximate principles, (per cent.,)	12	19.91	20
Saccharine do. do. do.	72	68.68	55
Oleaginous do. do. do.	9	7.33	2

The comparative nutriment values of the three grains, wheat being 100, is as follows, according to one authority:

Corn,	108.
Oats,	112.7
Peas,	90.7

According to the same authority the nitrogenous ingredients of the three grains, in per cents, are, in fresh condition:

Corn,	12.48
Oats,	15.67
Peas,	23.49

Dried at 212° Fah.:

	Nitrogen.	Carbon.
Corn contains, per cent.,	2.30	45.45
Oats do. do.	2.82	46.66
Peas do. do.	4.57	45.33

According to some authorities, peas contain four times as much nitrogen as corn.

From all these ascertained facts, we deduce the conclusions that corn is best suited to make fat upon a mature animal, while oats and peas are best adapted to keep stock in good "store" condition, or to make young animals grow. Starch (of which corn contains about 80 per cent., oat-meal 59, and peas 32,) contributes to the formation of fat; and here it is to be observed the corn has the advantage. So, too, of the oily matters. These, as well as the saccharine principles, belong to a class of substances which, containing no nitrogen, cannot be converted into the fabric or flesh of the animal body, but are designed to be consumed in the system for the production of animal heat. And here it may be observed, that the proportion of the saccharine principles in oats and peas is sufficient for the purposes of this latter object. The albuminous or nitrogenized compounds, however, which go to repair, construct fibres and tissues, and make muscle, &c., exist in a much greater degree in the oats and peas than in corn. It follows that the oats and peas contain the more of the true elements of *nutrition*, as contradistinguished from the *fat-forming* constituents. Therefore, this mixed grain is most suitable for ordinary feed.

Oil cake is highly valued, and because highly nitrogenous. Peas approximate closely to oil cake in per centage of nitrogen; and the advantages of feeding them arise, not so much after all from the less amount required by the animals, as from the increased value of the manure. And the manure again produces more highly nitrogenized crops, thus continuing a perpetual circle of benefits.

Boussingault estimated, from experiments and analyses, that the equivalents to 100 lbs. of good meadow hay were

Of Corn,	59	pounds.
Oats,	68	do.
Peas,	27	do.

Pork fatted on peas is deemed firmer and of superior quality to that made from corn; and the manure of hogs fed upon peas, is believed to be worth nearly four times as much as that made from corn-fed swine, by reason of the greater quantity of nitrogen, the essential element of ammonia.

With an abler advocate, there is no doubt a much stronger case, in favor of raising the crop in question for the purposes of feeding stock, might be made out. But perhaps enough has been said in the foregoing to draw attention to the subject. It remains to be added that not a few farmers find their soils unsuited to corn, while they produce oats or peas with success. To such we would say, when your backs are tired hoeing spindling corn, or your fingers a-cold husking the "nubbins" you have raised, try oats and peas. By judicious manuring and thorough tillage, much larger yields may be obtained than the one we have assumed in our estimate. In some districts, it may be, the bug still infests the pea; but this scourge has passed away from Western New-York. Doubtless, to the great corn-growing regions of the West our theory would be inapplicable. But in all wheat-growing sections, the chief object of the farmer is to promote the *accumulation of ammonia*, which wheat, in its growth, not only requires, but consumes and destroys. Now, peas do not destroy ammonia, but, on the contrary, drawing large quantities of nitrogen from the atmosphere, they return to the soil, in the manure made by the stock to which they are fed, the same element so indispensable to the next crop of wheat. It may be asked, why not raise clear peas instead of mixing oats? To this we answer, first, that the mixed crop yields upon land in rich condition nearly as many oats as if clear oats, and gives the peas extra—we have known between 80 and 90 bushels produced to the acre; secondly, the grain is more advantageously harvested, being easily cut with Manney's reaper, and thirdly, though we can furnish no scientific reason therefor, we have found the mixed grain the more convenient and useful in practice. Of course, we wish to be distinctly understood as advocating the raising of this grain to be fed on the farm, and never to be sold.

Canandaigua, N. Y. HAMPDEN.

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Large Cattle.—I send you the weights of some large cattle, raised and fatted in Gloucester Co., N. J. The weights of four are as follows:—2,283—2,051½—2,022½ 1,981½—dead weight. Joshua Pine.

FARMERS' TOOLS.

A certain number of tools, and some skill in their use, will often save the farmer much time in sending for a mechanic, and some expense in paying him. Every farmer should be able to make small repairs on his wagons, gates, buildings, &c. A room, or a portion of a room, should be devoted to keeping these tools; a pin or nail should be inserted for each one to hang on, and the name of each tool written or painted under the pin, that it may be promptly returned to its place, and any missing one detected. Keep every tool in its place—do not wait for a more convenient season, but return every one to its pin the moment it is done with. If left out of place a minute, it will be likely to remain a week, and cause a loss of time in looking for it, a hundred times greater than in replacing it promptly. Keeping every thing in its place is a *habit*, costing nothing when formed. The tools should be, a hammer, saw, augers, brace and bits, gimlets, screw driver, wrench, two planes, chisels, mallet, files and rasp, saw-set, trowel, and a box with compartments for different sized nails, screws, nuts, bolts, &c. Common farm implements and tools, such as hoes, spades, shovels, forks, rakes, scythes, &c., may be in the same room, on the opposite side, and the same precautions taken to keep every one in its place.

PASTURING.

It is poor economy to feed pastures very close. They will yield much more, if the grass has a fair start, than if fed down so low that it can scarcely grow. Cattle which pick a pasture down to the *bone*, nearly always run largely to bone. John Johnston supposes a case, founded on repeated observation, in illustration of this truth. He says: "A. has a field which he thinks will keep twenty cattle, and he puts them into it. B. has a field of the same size and quality, but he puts only ten cattle into it. Now it will almost always be found that in the autumn, the ten have gained as many, often more pounds live weight, than the twenty. The 10 with first rate pasture should gain 400 pounds each, and it is doubtful if the 20 would have gained 200 pounds each. The 10 would make extra beef, and bring an extra price, while the twenty would make only third-rate beef, bringing little more per pound than they were worth when they were turned to pasture. The ten paid $25 each for their pasture, or perhaps more. This I have often seen."

GREAT FEAT AT CORN-HUSKING.

We have been often amused in this part of Jersey, when we read of machines for husking corn, but when we saw one at our Somerset County Fair, we could not help laughing outright at it—for it is not uncommon for a good hand to husk from 80 to 100 bushels ears of corn in one day in this region of country. But when we saw in the January Cultivator, and also an explanation in the number of February, of a young man husking 40 bushels in six and a half hours, we thought we would become communicative, and tell you what has been done in this part of the country. In the fall of 1856, in the month of November, my brother-in-law, who resided with me, husked 120 bushels ears corn in one day, pulled down the stacks which numbered 80, and bound up all the stalks. The corn I picked up myself, and measured my basket with a half bushel. The corn was a reddish yellow variety of 10 or 12 rows, and planted on a clover sod that had lain one year, without any manure, and gave about 90 bushels ears to the acre. James Opie.

MARKET FAIRS.

☞ It is proverbially difficult to change the course of Trade. Of all habits, those of buying and selling appear most regardless of any law except established custom. Hence, great as are the advantages of Market Fairs, it cannot be anticipated that they will *at once* assume with us, the important rank which they may, very likely, attain after a generation or two of sellers have grown up into dependance upon them, and they have acquired pre-eminence with the purchasing public, each for itself, as the best resource for this or that particular sort of stock or product.

We do not write with the view of discouraging those who are entering upon such undertakings in various parts of the country. Certainly the Market Fair can never grow into importance, unless it has sometime a beginning; and the earlier it is born into the world, the sooner it must attain age, dignity and strength. Despise not, then, the day of small things. If there is really room for a Market Fair in your vicinity, do not be disappointed, if the first or second time the experiment is tried, "all the world" should not be there to bargain, to bid, and to buy. Stand up to your determination; try again; remember that the *permanent recurrence* of such occasions, *upon which the public may depend*, is a condition precedent to their ever becoming a fixed "institution:" therefore, unless some plan is decided upon definitely, adhered to persistently, and carried out promptly and with regularity, there is just so much time and labor irretrievably lost.

—Our readers were some weeks ago apprized of the intention of the managers of the Hampden Co. (Mass.) Ag. Society, to hold a Market Fair at Springfield last week. The Republican says that "nearly 2,000 persons must have been present, with 200 horses, from 75 to 80 neat cattle, a respectable number of sheep and swine, and large quantities of produce." The stock, however, appears to have been rather dull of sale, but "grains, seeds, hay and straw, were in lively demand." There were a considerable number of Implements present. Our contemporary concludes as follows:—

> Some of the mistakes of the farmers who do not comprehend the nature of a market fair are really ludicrous. Not a few imagined that the secretary and committee of arrangements were under obligations to sell their produce for them if they but brought it to the grounds, and others thought the bare registry was sufficient without exhibition. The true way for a market fair is for each man to stand by his produce and stock, and sell as he would on any other occasion. The thing, however, is inaugurated, and we trust will become a permanent semi-annual.

—In several instances in Kentucky and Ohio, these Market Fairs are already well established. The scenes of "a court day in Bourbon" have been described in our columns, when stock to the value of thousands of dollars changes hands, and all Paris (in Kentucky, and not in France,) is alive and stirring. A correspondent recently showed that the farmers of Madison county, Ohio, were waking up to the importance of such sale-days; they take place at London, (in that county, and not in England,) and we have just received an account of one which was held the 2d inst. "Tuesday," says the local paper,

> "Was one of the liveliest days in London we have witnessed for a long time. Our streets were crowded with people, and as the day was fine, every body seemed in good humor with themselves and the rest of mankind. Notwithstanding the roads were unusually bad, a considerable number of cattle found their way into market, and were sold at prices somewhat lower than at the last sales. The following is our report as furnished by our regular reporter."

And from the report we learn that nearly 250 head of cattle and several lots of swine changed hands. At the same time "a Butter Fair" was going on, at which fourteen prizes were awarded in six classes. This was arranged and carried out mostly by Mr. J. F. Willis, to whom much credit is accordingly awarded.

—To conclude, we have before us a Notice of the Second Market Fair of the Bedford Farmers' Club, which is to be held near the Katonah Station, Harlem railroad, (Westchester Co.,) on Wednesday and Thursday, May 1 and 2. Our friend Hon. John Jay, and Messrs. Jared H. and Oliver Green, are the Committee of the Club having the matter in charge.

[For the Country Gentleman and Cultivator.]

STALK GROUND.

Messrs. Editors—As the time for action is approaching, and with us is near at hand, I will briefly notice the treatment of stalk ground, (or the ground on which corn was grown last year.) It is a common thing in passing through the country, to see many stalk fields lying idle, and grown up with weeds until fall, when they are plowed up for wheat.

Now I would ask those persons, who let their stalk ground lie over idle, through your valuable journal, a few questions, and then give my mode of culture.

1st. If the weeds do not exhaust the soil as much as a crop of oats?

2d. If the weeds, when plowed under in the fall, benefit the land as much as the growth of the summer exhausts it?

3d. If it does not make the ground too light for a good yield of wheat, by plowing the weeds under?

4th. If it is not liable to make the ground very filthy, and require more labor for the next crop of corn?

5th. If the weeds are more valuable for pasture than clover, had it been sown among the corn?

My mode of cultivation is this. I either sow my corn ground in wheat in the fall, when I cut up the corn, or sow it in oats in the spring. In either case I sow it with clover. Pasture it one year; then plow for wheat, and set in grass.

Some persons object to sowing clover seed after oats, saying it does not take well. If these persons will sow the seed as soon as the oats are harrowed in, and follow the sowing of the clover immediately with a roller, they will cease saying that clover will not take after oats.

Glenville, Harford Co., Md. J. P. S.

* * *

[For the Country Gentleman and Cultivator.]

SHEEP SHEDDING THEIR WOOL, &c.

In the Co. Gent. of April 4, p. 224, "E. P." says: "Will some of your readers inform me how to prevent my sheep from shedding their wool? Some attribute it to feeding oats, but as I have not fed any, that cannot be the reason." We dare say that feeding oats is not the reason, though *not* feeding oats, or some other grain, may be. Were E. P.'s sheep in good condition when they entered the winter, or were they poor, and has he been trying to bring them up recently? It was substantially remarked in an editorial article on the "Care of Sheep in Winter," (Co. Gent.) Jan. 3, '61, that when sheep lose their condition in November and December, it stops and completes or ripens the growth of wool, so that on the renewal of good food and increase in flesh the skin sends forth a new growth of wool that pushes off the old and causes it to fall from the sheep. This seems a very reasonable solution in many cases, though it may not be in "E. P.'s." At any rate, we have never known sheep kept in good order at all seasons to shed their wool before it was sheared off. Hence the preventive is constant care and especial attention to see that they enter kindly and without loss of condition on the change from fresh grass to winter fodder.

Best Food for Ewes.—"E. P." asks "also what is the best feed to insure a great flow of milk?" The late David Ely, Esq., whose opinions on all questions of sheep husbandry were the result of close investigation and long experience, once told the writer that no grain he had ever fed to ewes had been so available in producing a flow of milk as good wheat *shorts.* About one pound per day is the proper quantity, say half a pound morning and evening. Corn he regarded as injurious, as far as milk was concerned, and dangerous if fed in any quantity.

With plenty of early cut and well cured clover hay, ewes will generally yield a good supply of milk, and with half a pound of corn and beans in addition per day, and plenty of clean water, good lambs can be raised in winter. Roots might be used to good advantage, but we have had no experience with them. A Young Farmer.

[For the Country Gentleman and Cultivator.]

CARROT CULTURE.

Will it pay to raise carrots for feeding stock, is a question often asked. It don't pay, is an assertion often made. Brother farmers, it does pay, and I will tell you how. It pays in the extra amount of food raised for a given amount of land and labor. I have not failed to raise but once in 12 years, a good crop of roots, mostly carrots, and have found them to pay me better than any crop that I can raise for cattle, sheep and horses.

I call it a paying crop, even to sell. I once had three-quarters of an acre from which I sold $100 worth, and kept over 100 bushels.

I consider them a very sure crop when properly managed, and verily believe that 100 bushels would be raised where *one* is raised now, if farmers had not got the wrong notion that it is an " awful job " to tend them.

I give my way of raising, hoping that *some* may " try, and if they don't succeed, try again :"

Take a rich piece of sward, where the soil is deep, the longer seeded the better. Cover with stable manure; plow with a double plow; roll and drag fine the last of March or the first of April. Let it lay till the first week in May; then gang plow and drag fine again, (to kill weeds,) and sow immediately 2 pounds of seed per acre. I use one of Emery's seed planters, and drill from 18 to 20 inches apart. Be careful and not get the seed too deep. The first year I got my seed drill, the seed was put so deep that the plants were thin—but oh! what carrots! some weighed 10 pounds.

As soon as the plants are up sufficiently to trace the rows, grind up your hoes sharp, and commence by hoeing between the rows as close as possible to the plants, and *be sure to cut across the rows and leave the plants the width of your hoe apart*, and if you are a Yankee there will not be many weeds left. After about two weeks hoe in like manner, and what weeds are left pull with your finers, and leave the carrots about 7 or 8 inches apart. This is near enough for profit and plants. If your land is not full of foul seed, there will not be any further trouble until harvest.

When the land is rich and well tended, the roots will have to be spaded out—a plow and pulling out is sure to break off a great many.

I think—won't say think—I *know* that carrots can be raised for five cents per bushel, and think they can be raised for less. Let's figure a little :

Use of 1 acre,	$7.00
Manure,	10.00
Plow, roll and drag,	2.00
Ganging and drag,	1.00
Seed and sowing,	3.00
Hoeing and harvesting.	20.00
Whole expense,	$43.00

And this is liberal for one acre. Estimating the crop at 1000 bushels this would give us a cost of 4 3-10th cents per bushel on the average, and the value of the crop, at 12½ cents per bushel, which is low, will be $125, a profit of $82. Can any one show as good figuring in any other crop?

When taken in connection with other feed, they are invaluable. They are not only healthy, but will fatten cattle, sheep and horses. I have fatted and sold four head of cattle this winter on carrots, with one quart of meal sprinkled on them at a feed, together with cornstalks. One was a Durham cow, milked all the while until *sold for beef, and was fat*. This was an experiment, and proved satisfactory—that cows can be fatted on carrots and meal, and milked at the same time—at no time was the meal over 2 quarts per day.

I also have six other cows, all of which give milk of the richest kind, and a good flow of it, that are fed on carrots once a day, and once on poor cornstalks and clover hay.

From 700 to 800 bushels per acre is an ordinary crop, and may be obtained with ordinary land and culture—1200 may be raised, and even more, by high cultivation—mine this year went at the rate of 1200, and the cost of *labor*, aside from topping, which my little boys did, will not exceed 2½ cents per bush. This (the cost) is partly owing to the fact that the ground was not very weedy.

Allowing 250 pounds of carrots (which is conceded by practical farmers) to be equal to 100 pounds of hay, and at 60 pounds to the bushel, we have at the above rate of yield the equivalent of over 14 tons of hay per acre, which will take seven acres of *good* meadow to equal.

This may astonish some who bear the name of farmers. I know whereof I affirm by actual experience. As for *this* part of husbandry, I consider a farmer a poor calculator who hires his many acres of June and wire grass mowed by manual labor, and raked by hand, being too slippery and short to be raked with a horse-rake, which is half wasted in the winter, for the reason that nothing *can* or *will* eat it, and then coolly tells you that it *don't pay to raise roots*. Oh! consistency thou art a jewel!

There are other points connected with the culture of carrots that the writer would like to talk about—quality of soil—condition of land for succeeding crops—killing of Canada thistles by the cultivation—mode of harvesting, feeding, &c., &c.; but thinking that the readers will consider themselves *poulticed* with carrots sufficiently for once, I ask of correspondents, further considerations on this subject. G.. *Orleans Co., N. Y.*

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[For the Country Gentleman and Cultivator.]

HOW TO REAR CATTLE.

The Proper Management of Calves.

Now, the one great and leading idea is to keep a calf *growing*, until a point is reached in his weight which we cannot with profit exceed. We want to adopt that system of management with our calves, which will not render them as fat as it is practicable to make them with a little impulsive feeding; but which will keep them constantly growing all the year. Whether they are allowed to suck, or are fed by hand, it is very important that the management be such that they do not, not only fall away when they are weaned, but continue to improve in size and flesh. If they are allowed to fall away or to stop growing, there will be want of success in feeding in years to come. Therefore, before calves begin to grow poor in autumn, or at the commencement of winter, they should have at least a quart of meal every day. The meal thus fed will not be lost. During the cold and stormy days and nights of autumn, they should be allowed to have a good shelter to protect them, as one cold storm will use up more fat and flesh than they can put on in two days. During winter they must be kept in a thrifty condition. We cannot expect that calves will grow in the winter as they will in warm weather; but by *keeping* all their fat and flesh on them, and keeping them in good health, when they are turned to grass, we shall perceive a two-fold efficacy in the meal and other food, which did not appear to be as effectual in promoting their growth during the winter, as we had desired to see. It is the every-day, faithful attention that makes good calves.

My own management with calves is to prepare a comfortable shed for them before cold weather commences. I prefer a good shed for them, to confining them in stalls. In the morning we feed them as much cut corn stalks as they will eat during the former part of the day, and they always have access to straw. At noon they are fed cut feed, and each one receives not less than a quart of fine meal, mingled with the moistened straw. The meal is usually equal quantities of oats, buckwheat and Indian corn. When we can get oil-meal, we mingle that with the other meal, so that it is about one-fourth oil-meal. At evening they have as much good hay as they will eat all night. Three times a week, at least, they get nearly a peck of roots each—turnips, or potatoes, or carrots. When they begin to feed on grass in the spring, after the cornstalks and hay have been discontinued, they get a mess of cut feed and meal every morning, until their bowels have become accustomed to grass. Whether they are in the yard or pasture field, they always have access to a tub of salt. This brings us to

The Second Year's Management in Feeding Stock.

If calves have been kept for one year, as has been recommended, we are sure of a most excellent start in a right direction towards rendering feeding of stock a paying business. Now the main thing is, to keep the yearlings growing all the season. In autumn, whether grass is short or not, if yearlings are fed with pumpkins or such trash, a little care must be exercised lest after the pumpkins fail, they do not begin to fall away before they get into winter quarters. Farmers are very apt to allow their young cattle to begin to grow poor at the beginning of winter, before they are really aware of it.

When animals are passing from grass to hay, at the commencement of winter, they will decline in fat and flesh wonderfully quick, if special care is not exercised in feeding them. Therefore, a little meal must be fed daily when the pasture is short, until they are fully into winter quarters. Now let the management be with the animals in their second year, precisely as with calves; only I always give them about two quarts of meal each, instead of one, with a daily feeding of turnips of nearly a peck each.

Another thing, in feeding stock, after the first year I consider it very important to have suitable stalls for them, as they will hook each other, and race about the yard so furiously many times, that every one does not get his allowance.

My own practice is to feed them in the morning in their stalls, and let them loose in the yard, where are spacious open sheds, and straw and water, till noon, when they are again fed their cut feed and turnips, and after an hour or two turned into the yard to eat straw and drink, until towards evening, when they are fed in their stalls all the good hay they will eat until morning. Great care is exercised in turning them to grass, that they do not get the scours, and fall away by passing too soon from dry to green food.

This brings us successfully to

The Third Year in Feeding Stock.

Now, as we enter upon the requirements of this year, there is great danger of over-stocking the pasture; and it must be borne in mind, that a bullock in his third year, will require more grass to keep him growing, than it did when he was but a yearling. It is the worst kind of farm policy to keep so many cattle in a pasture, that they gnaw every thing close to the earth, and then not obtain as much as they can eat. It is as important to keep stock growing during the *third* year as any other year; but if they are kept on a short allowance of grass, they cannot improve as they ought to, nor as they would, did they have as much grass as they can eat during the entire season. I always manage to have so much of my land in pasture, that my cattle will always have a "good bite;" and also to raise a few calves every year, and turn off a few beef cattle, so as to keep about so many from year to year. There is great danger of getting too many three-years-old steers on a small farm. We want to keep them growing during the third year, and at the same time have an eye on the improvement of the farm. If we turn so large a number of young cattle into a pasture, that they keep the grass gnawed close to the ground all summer, so that the leaves never are allowed to grow large enough to draw but very little nourishment from the atmosphere, there will be a much greater draught on the soil. I always aim to let my pastures get a little ahead of my stock, and never to keep so many, but what we would think there is an abundance of pasture for two or three more.

Multitudes of farmers get wonderfully frightened about their cattle in the third year—because they eat so much—and they begin to figure up the expense for two years past of keeping them, and about how much it will cost before they will be able to realize any pecuniary compensation for them, and so they will begin to feed a *little less*, thinking it will never pay to feed out grain and hay at such a rate; and will often sell their stock at a low figure, just at the time when they are improving the most rapidly, and are paying better for their feed than they have in any previous year.

Sometimes men get frightened in the first or second year, and sell their cattle for just what they can get. A friend of mine last fall got the "blues" a little, and sold a fine yearling steer for $16; when his cash value, after being dressed, was worth—as the butcher told me—$24, at 4 cts. per lb.

My practice is to set my stakes *for years ahead*, and not stop to parley with Mr. Stingy's penny-wise and pound-foolish policy, which is ever suggesting that it will not pay to feed so much grain to stock. I mark out the course—pay or no pay being the motto—to keep my cattle improving, summer and winter—to feed them all I can induce them to eat—not to try to keep them on as *little* as I can—to produce a good lot of beef, which will always command a good price; to make a good lot of manure, and to apply it with care to the soil; and to raise good crops; and to keep the soil good, and always improving a *little.* After a while the pay will begin to come.

The Fourth Year in Feeding Stock.

Now, we want to maintain a firm, steady, inflexible perseverance in feeding this year, or we lose much of the profit of the previous years. When a drover inquires for bullocks or fat cattle, tell him you have none to sell; and if urged to fix a price on them, it will be better to fix it at twenty or thirty dollars *above* their true value. But do not be deceived in their weight. A young bullock will often weigh like lead; and a young farmer ought *to know* what the weight really is, and how much they are worth per pound, before fixing a price.

In autumn of the fourth year—which is as far as I have ever been in stock feeding, and farther deponent sayeth not—let not the stock fall away as the grass begins to fail; but, if no meal is at hand, let each one have a few quarts of corn daily. A quart or two of corn and barley meal will be better. Keep them improving all winter. Don't get the "blues" because they eat so much. Pay day is just a little ways ahead, when you will have a pocket full of cash for your long faithfulness. Do not wait until the beginning of winter, until your cattle begin to grow poor, before you feed them any meal; but begin at once to feed them at least two quarts of meal, with cut straw, cornstalks and hay, and never neglect roots of some kind. Instead of *diminishing* the quantity of meal mingled with cut straw, increase it from month to month. About the first of March, as warm weather approaches, if your stock have been kept as recommended, their appetites will begin to call for a little more meal; and they may be fed of buckwheat and Indian corn, and oil-meal if it can be obtained, six quarts per day. Some animals will need *eight* quarts per day, and it will pay well to feed them that amount. The skillful feeder must exercise his own judgment a little in this respect, as it is impossible for any man to tell on paper how to manage every animal, as they will often require very different management.

At this stage of feed we may begin to make calculations for

Finishing Beef Cattle for the Shambles.

Now, if the young farmer has paid that attention to saving, making, and applying manure to his soil, during the three or four previous years of feeding stock, which he should have done, he will have a few acres of early pasture, designed particularly for giving the *finish* to his meat; and as soon as the grass is large enough for a tolerable good bite, let the animals be fed in the morning one quart of oil-meal mingled with two quarts of Indian corn meal, with one quart of buckwheat or barley meal, with a half bushel of cut straw and hay; and then about ten o'clock drive them to pasture, and let them graze about one hour, when they should be returned to the yard and fed as usual. After three or four days have elapsed, they may be allowed to graze two hours. But as soon as they have eaten enough they should be yarded, as they will soon tread down and injure more pasture than they eat; and by racing and romping will use up half as much flesh as they have taken on. Let this practice be continued for twenty or thirty days, not diminishing the oil-meal and other meal with cut straw, twice a day. If grass is abundant, I would not feed more than one peck of cut straw at once. But it will be much better to feed the meal mingled with *some* cut straw, than to feed it clear. At such times, and in fact during the entire year, I let my stock have access to salt.

The foregoing system of management has never failed to produce tip-top beef, which butchers will always be willing—or always will, whether willing or not—purchase at an extra price. Now, after the stock have been fed on grass for a few days, the meal will tell of a large profit; and

The Stock will be Ready for Sale.

At such times, my practice has been to invite some responsible butcher to see them, and agree to take them after they have been feeding on grass for about a month. Beef fatted in this way will, almost always, command from one to two cents per pound more than that which has been fattened in a hap-hazard way; and if a man understands his business, butchers will not expect him to accept the price paid for ordinary beef.

There is another thing of great importance, in finishing up the beef at the former part of the grass-growing season. It is very important that the stall-fed bullocks are well fitted for market, before butchers can obtain a good supply of second-rate, "slippery," or only grass-fed cattle; else, the price of extra beef will be brought into competition with cattle of an inferior quality.

S. EDWARDS TODD.

[For the Country Gentleman and Cultivator.]

Experiments with Superphosphate of Lime on Indian Corn.

MESSRS. EDITORS—I have read with much interest all that has been published in the COUNTRY GENTLEMAN, in relation to superphosphate of lime, for a number of years past. In regard to its use, I find that with some of your correspondents it has been very beneficial; with others it has done no good at all. I do not remember, however, as any one of them has made trial of it more than one year, excepting in one instance where it was tried two years. Perhaps if it had been tried a number of years it would have produced different results. Having used it myself for six years past in growing my Indian corn, some years with as good effect as any I have seen published, and some years with no effect, perhaps an account of my success with it may help to explain the cause of its uncertain operation.

The land on which I grow my corn is white pine plain land. About one hundred years ago it was a "rye field," and had been used for that purpose until it was worn out, when it was allowed to grow up to its natural growth, white pine. Over thirty years ago, a part of the field was cleared of its wood and made into a pasture for cows, and was used for that purpose twenty years. The remainder of the field I have had cleared up and brought into cultivation as I have had occasion for it, within twelve years. I mention these particulars, because it is generally supposed that superphosphate of lime has a much better effect on old pasture land than on new, or recently cleared land, a supposition which, however true in theory, does not appear to be very well supported by my facts, perhaps because the so called superphosphate of lime does not contain a *super*-abundance of *super*-phosphate of lime, or of phosphate even.

In the spring of 1855, a portion of the old pasture land had at the rate of about six cords per acre of barn cellar manure spread on, and plowed in eight inches deep. It was prepared for planting with corn in hills, three and a half feet apart. Into the hills of one-third of the piece, I had a large tablespoonful of superphosphate of lime dropped with the seed and covered at the same time the seed was. Another third of the piece had a handful of the Lodi Co.'s poudrette put in the hill in the same way the superphosphate was. The other third of the piece was planted without anything in the hill. As soon as the corn was up two inches high, the part that had the superphosphate applied could be very plainly distinguished from the rest of the corn by its darker green color and stouter appearance; it soon took the lead, and kept ahead of all the rest of the corn all through the summer, so that the difference could be seen at any time as far as the rows could be distinguished. The part which had the poudrette in the hill was much better than that without anything, but not near so good as that with the superphosphate. There was a frost the first part of September, which damaged all of the corn except that which had the superphosphate applied, which was all well ripened before the frost, and was the only part that produced good, sound, well ripened corn, fit for seed.

Seeing so good effects from superphosphate of lime in the preceding case, I concluded at once that it must be the very thing needed for my land, so I used it in planting all of my corn in the years 1856–'7, in which years the corn was planted partly on the old pasture land and partly on the newly cleared land, after plowing in about eight cords per acre of barn cellar manure, and preparing for planting in my usual way. I could not see but that it had just as good effect on the newly cleared land as on the old pasture.

In 1858, my corn was planted partly on the newly cleared and partly on the old pasture land, having prepared the land as in the preceding years, differing in this respect only, that this land had been manured well with barn cellar manure and planted with corn in 1854, the year before I began to use superphosphate of lime. That on which I had my corn the three previous years, had probably never been manured before those years. I applied the superphosphate of lime in the hills of all the corn, except a few rows left for comparison, as usual. When the corn came up I was quite surprised to find that there was not the least difference to be seen, nor could any difference be seen at any time in the season. Of course I supposed the fault was in the superphosphate; but one of my neighbors had used on his cornfield the same kind of superphosphate that I had used on my own this year, with more surprising effect than I had ever seen before. On land similar to my own, which had been in pasture for forty or fifty years, he applied a good manuring of barn-yard manure, and at planting put superphosphate in the hills of all the corn except about a dozen rows on one side of the piece, which were neglected from not having enough for the whole piece. The result was, these dozen rows came up very poor, and looked extremely miserable, by the side of the rest of the corn, all through the season, and produced hardly corn enough to pay for harvesting. The rest of the corn was very stout and thrifty from its first coming up, and was one of the best fields of corn in the neighborhood. This was the same kind of superphosphate of lime that I had used, or at least it was marked with the same manufacturer's brand, and bought of the same agent. Why then did it not have as good effect on my land? Could it be because my land had been well manured four years before? One more trial of it will help to decide these questions.

In 1859 I planted my corn partly on some of the land that had been manured in 1854, and partly on the newly cleared land that had never been manured before preparing it for corn this year. Super-phosphate was applied in the hills of all of it. On the newly cleared land it had as good effect as it ever had had before. On the old land that had been manured in 1854, it did not have the least effect, neither when it first came up, or at any time during the season. This satisfied me that it was of no use to apply superphosphate of lime to my land for corn after the land had been once well manured, or at least till more than five years after. Perhaps if I should let the land lay in grass till it had got completely worn out it might have a good effect again. The past year I have used but little superphosphate of lime, but the result of it confirmed the above opinion.

Besides these experiments of my own, I have noticed its effects in a number of instances when used by my neighbors, and I have found that in all cases where it has had a very marked good effect, it has been on old worn out land that had not been manured for a long time, if ever before. This appears to be the case, also, in the instance mentioned by Mr. HOLBROOK, CO. GENT., vol. 16, p. 157, and also in the experiments of Jos. B. WALKER, Esq., reported by Mr. BARTLETT, vol. 16, p. 299, and I have no doubt that if the condition of the land had been stated, it would be found to be so in many other instances.

On old worn out land I think a good article of super-phosphate of lime, considering the ease with which it can be applied, one of the best things that can be used in the hills of corn to give it a start, and help it along through the season; but it is a costly manure at the rate of over fifty dollars per ton, the price it is sold at here. I think, however, that it may be used in less quantity than what I have used with equally as good effect. I have seen a *tea-spoonful* in the hill have as good effect as a table-spoonful, or even a handful, but in this case it was a genuine good article of *super*-phosphate of lime. On land that is in as good condition as farmers ought to keep their land, even a good article will not "pay," so far as my experience and observation extends.

The above is a simple record of *facts* as they have occurred in my "every-day farming." They are not offered for publication with a view to puff any particular brand of super-phosphate, and for that reason I have withheld the manufacturers' names. I have used several different kinds, and found one about as good as another; but it will be remembered that some of it was used seven years ago, when some super-phosphate is said to have been of a better quality than it is now-a-days, and which some small experiments I have made, but have not mentioned here, go to prove. A. C. *Concord, N. H.*

[For the Cultivator and Country Gentleman.]

SUNDRY NOTES ON BEES.

A few days since I received several numbers of the French Bee Journal, now in its fifth year, published in Paris and edited by M. H. Hamet. I extract from it the following, which will doubtless interest some of your readers:

> "The year 1860 was a very unfortunate year for the bee-keeper. Its equal does not occur more than two or three times in a century. Some good may result from every evil, and this year has fairly proved the absurdity of the belief, still prevalent here and in many countries, that bees require no care, and the more neglected, the better they prosper. Throughout the greater part of France, only intelligent and careful bee-keepers have succeeded in wintering their stocks the past season, without serious loss.
>
> In every country the bee requires care adapted to the climate, honey, resources, &c., and apart from general principles, which must be observed every where, different situations require the observance of specific rules or management, specially adapted to the locality."

The French Bee Journal contains a record of passing events interesting to the bee-keeper—calendars of the prosperity of bee culture in distant parts of the country, and reports of meetings of societies and conventions. In several instances I noticed that the societies held their meetings on Sunday—for instance, the first Sunday of every month.

Reports from distant points in our country, would be very instructive and add much to the interest of your "bee-keeper's department."

In treating of burial of bees in winter, several writers state that they think the advantages gained are too slight to repay the trouble and expense; still they recommend it for northern countries where the winters are very severe.

Straw hives are preferred in France. Some state that bees kept in them swarm earlier and oftener. Depredations of mice, one objection to them. Wood objected to on account of extra cost. Hives made of wood are more durable. From the price of labor here, a well constructed straw hive would cost more than one in wood.

Many different forms of fumigators are given, all bearing some resemblance to either a pepper-box or a syringe. Smoke from dry rotten wood blown in the hive, will in most cases answer. The cheapest and best fumigator, is a common pipe with large bowl, partly filled with tobacco—light and blow the smoke through the stem between the ranges of comb. Very little will answer—be careful not to use too much.

All hives containing clean combs, in which the bees have died during winter, place in a cool dry cellar, protected from the bee-moth. They are valuable to lodge your first swarms in.

To avoid robbing, it is preferable to feed inside the hive at night, all stocks that have not sufficient stores for winter. Feed as rapidly as possible; otherwise they will be stimulated to breed actively, and thus waste much food, and if severe cold occur, much brood may be chilled.

How much food can a swarm consume or store in a day? One writer says 28 lbs.

The Germans use rye flour and oat meal as a substitute for pollen. The French state that bean flour answers equally well.

A Bee Almanac is published in France, containing the usual information, and in addition, Natural History of the Bee, Monthly Management, Bee Statistics, Advertisements of Dealers in Bees, Honey, Hives, Wax, &c.

Pruning is seldom attended with any benefit. In operating never destroy any brood.

Artificial swarming by aid of smoke and drumming, is well described by one Jayme Gil, Spain, 1621. To ascertain the presence of the queen in the empty hive, when not otherwise indicated, he placed under the hive a black cloth, and if present, in a short time eggs would be found upon the cloth, there being no comb to receive the eggs.

The principle to be observed to unite colonies successfully is to bring them into the same state, "under the same impression." This is generally done by smoke and drumming. If not in the same condition, they will fight

Is there any mercy in not killing bees in autumn? As the worker bee lives less than a year, the same worker cannot collect honey two seasons; so we think that when one has more stocks than he wishes to winter he should not be over scrupulous on this point.

Shallow feeders made of unglazed earthen ware are recommended by some writers.

Bees sometimes kill their queen after an early spring examination. This sometimes occurs in examining in the autumn. It is therefore advisable to disturb as little as possible at these seasons.

In a late No. of the CO. GENT., Mr. QUINBY criticised freely an article of mine, in which his experience differed from my practice. His management is undoubtedly better suited to his latitude than mine. We feel pleased that Mr. QUINBY does not allow friendly relations to interfere with a frank expression of opinion. E. P. *New-York.*

[For the Country Gentleman and Cultivator.]

To Farming Tanners---Tan-bark for Potatoes.

A dealer in the "swamp" once observed to me, his father worked a farm and a tannery—and used to say that some seasons the tannery paid for the farm, and at others the farm paid for the tannery. Still the farm was the pet, and my friend thought the tannery was paying for the farm all the time. Be that as it may, it is certain the combined results were abundantly satisfactory.

In THE CULTIVATOR of August 1859, page 259,* is an article headed "Tan-bark for Potatoes," detailing the practice and experience for 35 years, of a Mr. Bamford in this matter. He says that in 1857, he raised 675 bushels—not a rotten one among them—to the acre, with no other covering than waste tan. Referring the reader to the article, I subjoin an experiment suggested by the foregoing, in 1860:

April 23.—Plowed and furrowed—about four inches long stable manure in bottom of furrow, well tramped down—set the potatoes, peach blows, whole, 12 inches apart—covered with a light layer of straw, and over that about six inches of tan. May 23d, up. June 8th, plowed and dressed flat.

No other dressing, except keeping weeds down with hoe. Produce large and sound. It is to be observed that the tan was of oak bark, as it was also, doubtless, in the English case. Intend trying the same more largely this season. C. *Salisbury Mills, March,* 1861.

SEEDS, &c., BY MAIL.—An important change was made in the post-office law at the late session of Congress. Seeds, plants, cuttings, &c., can now be sent by mail, at the rate of one cent per ounce for 1,500 miles—over that distance two cents per ounce. The packages must not exceed eight ounces.

"BALLOON FRAMES"---13th Article.

[Written exclusively for the Country Gentleman by Geo. E. Woodward, Architect and Civil Engineer, No. 29 Broadway, N. Y.]

In the construction of balloon frame houses the studs for those partitions that run through the building are not cut separately for each floor, as in the old mode of framing, but are preserved entire, or spliced when required, in the same manner as the outside frame. The studs pass between the joists of each floor, which rest upon a girt 1 by 4 inches, let into the studs. The joists are locked over this girt by cutting an inch notch on the under side, and lap each other from 8 inches to one foot, as shown fig. 18.

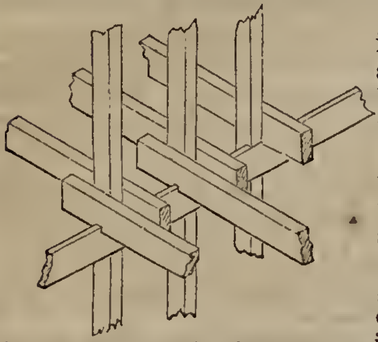
Fig. 18. Manner of framing Partitions that run two or more stories.

The flooring, when laid, is nailed to all the joists, and each joist, should be brought close up alongside the stud.

Figs. 19, 20 and 21 are the side view and end view, and plan of joists, showing the manner of doing the work. The side girts on the partition studding should be put on an inch higher than the side girts on the outside frame, unless both ends of the floor joists are notched, to be locked over the girts.

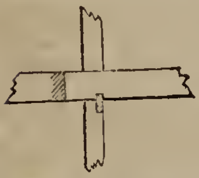
Fig. 19. Side View.

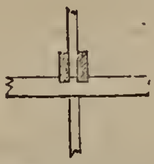
Fig. 20. End View.

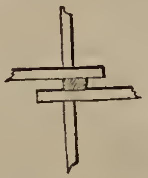
Fig. 21. Plan.

Showing manner of framing partitions.

Fig. 22. shows the manner of arranging joists over a partition that does not run above one story, or that which has no partition over it on the next floor. This is like the old mode, except that the joists are notched and locked over the plate. The object of lapping and locking joists, is to make them a continuous tie from one side of the building to the other, and when the flooring is nailed on, they are practically as strong as if they were in one solid piece. This prevents bulging, and the joists of all frames, whether balloon or otherwise, should be arranged in this manner. No matter what may be the width or length of a balloon frame building, the continuous tie of the joists in one direction and the flooring in the other, is of such strength as would require a superhuman power to separate them in the direction of their fibre. We have heard a western fire company swear worse than a crew of pirates in attempting to pull one down, and while the old-fashioned frame is but a plaything in their hands, they hate most cordially to grapple with the light sticks of the balloon.

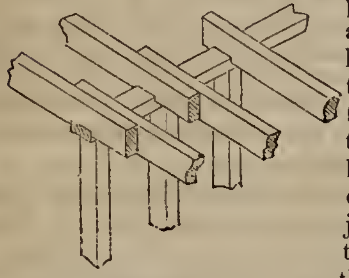
Fig. 22. Showing manner of framing partitions that run only one story.

It will be observed on looking again at fig. 18, that there are three continuous ties, in three different directions—thus, up and down, lengthways, and crossways, and that *every joint* in the frame, whether outside or inside, has each of these three different conditions of strength. This applies to the naked frame. After the flooring is laid and the outside boarding on, the building becomes so knit together, laced and interlaced, that it is as one entire piece.

The principle of balloon framing is the true one for strength, as well as for economy. If a mechanic is employed, the balloon frame can be put up for *forty per cent. less money* than the tenon and mortice frame. If you erect a balloon frame yourself, which you can easily do without the aid of a mechanic, it costs the price of the materials and whatever value you put upon your own time. If you have any doubt of its strength, security, durability and economy, you can find on every farm and hillside, and in every town and city of the great West and far West, from Lake Michigan to the Pacific, examples by the thousand that will disprove your fears.

We do not advance here any theories, nothing but what can only be considered a novelty among the older settled States, and a most valuable practical reality in those that follow the star of empire. The information that we are endeavoring to put into an understandable form, is the result of a thoroughly practical experience, and has been collected and collated with great care.

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[For the Country Gentleman and Cultivator.]

WINTERING CATTLE ON CORNSTALKS.

A FEW FACTS FOR OLD HURRICANE.

Messrs. Editors—I read with much interest an article entitled "Cornstalks for Fodder," in the Country Gentleman of March 14, signed "Old Hurricane." He first touches upon the experience of a writer from New-Hampshire, and of Mr. Cornell of Ithaca, saying "that he believes their statements to be widely at variance with the every day experience of those who feed cut cornstalks." He then gives us his own experience in a very well written article; and if all our knowledge of feeding cornstalks was derived from that article in your truly valuable paper, we should say at once, with our good friend "Old Hurricane," that "bass wood saw logs cut up, were fully equal to cornstalks for all purposes of feeding stock." But as we have some little experience in that line, we feel ourselves invited to give it, as we are in no way, directly or indirectly, interested either in the sale or manufacture of any cornstalk cutter whatsoever, except that we think there is too large a profit on them.

In the winter of 1858–'9, we commenced feeding twenty two-year old steers and eight oxen on cut cornstalks. We used one of Dutton's machines, worked by one horse, on a double treader. They were fed on *nothing else*, until within two weeks of pasture, when the stalks gave out and they were fed hay.

Three pairs of the oxen were sold readily at the highest market price. The steers we purchased in Sept. '58, at $20 per head, and sold in June and July for 4½ cents per pound on foot, averaging $47.50 per head. This we think sufficient comment on their coming out in the spring as "mere carcasses of bone covered with hide."

In the winter of '59–'60, we wintered 30 head of cows and steers in the same way, with cornstalks cut by the same machine, and all of them came through the winter in as good condition as any cattle that are not stall fed for beef.

The winter just passed, we commenced feeding 30 cows and one pair of oxen, with cornstalks cut in the same way; but finding the Dutton machine working rather too slow, we purchased a large one made by Hickok at Harrisburg, Pa., for which we paid $75, and which we think *too much* for the amount of work there is about it. Now we do not know Mr. Hickok or any of the Hickok family, but instead of joining with our good friend "Old Hurricane" in having him "indicted" for making and selling cornstalk cutters, we feel to thank him for making the best machine we have ever seen of the kind, and while we think it costs too much, would not take *three times* that amount for ours, unless we could get another equally as good. It cuts and grinds the stalks, and with two horses on the treader, two men and a boy, can cut enough in half a day to feed our stock a week. From about the 20th of November up to this date, we have not fed our stock anything but cut cornstalks, excepting the cows we were milking; they have had 12 quarts of brewer's grains per day, or an equal quantity of cut turnips each, while they were being milked. On the 15th January we sold three rather poor milkers for beef, they having had the same feed exactly as above stated.

Our cows are all stabled, and are fed one large corn-basketful of cut stalks per day each, half in the morning, and half at night. The oxen and five cows have had *nothing else*, since they came from grass. Some ten or twelve more of the cows have been fed only stalks as they have become dry, although with the above feeding of grains and stalks, we can milk nearly all of our cows to within a month of calving. We have not carried out ten basketfuls of butts this winter, although all our stalks are cut up by the ground; and when the cows are let out in the morning, they require some watching until they have galloped around the yard a few times.

Now I would like to have "Old Hurricane" feed a pair of oxen and 30 cows on bass wood saw-logs and brewer's grains for three months and a half, and then compare the animals. *They might* kick up their heels more than ours do on cornstalks, but we think not, although we have never tried them. YOUNG HURRICANE.

Claverack, N. Y., 1861.

[For the Country Gentleman and Cultivator.]

COST OF THE TURNIP CROP.

EDS. CO. GENT.—I stated that Mr. Brodie's turnips cost him less than three cents per bushel. I saw Mr. B. a short time since, and he kindly allowed me to take a copy of the account; and here allow me to say there are many things, seemingly trifles, but which make a material difference in cost of so bulky a crop as roots; for instance, the manner of sowing, the distance of hauling to the place of storage and manner of storing, and cultivating the crop, whether most of this is done with horse, or all by hand. Mr. B., as he says, "drills in the dung," that is, he first furrows out the ground, then hauls on dung with horse-carts—spreads dung in furrows and turns furrows back on to the dung, and sows on these ridges—the rows 27 inches apart, which he does with a drill he had made to order as near as might be like those used in Scotland. A roller goes before the seed-drill to pack and pulverize the earth, and another follows to roll in the seed. It sows as fast as a horse can walk. He also had a scuffler made, with which to work the crop, and with which he does all the work except thinning—goes through with the scuffler as soon as the rows can be distinctly seen, which is say ten days after sowing, and again as soon as turnip leaf or rough leaf appears, when the plants are thinned to from 9 to 12 inches. After this, goes through with scuffler as often as necessary.

Mr. B. says perhaps some crops can grow with weeds, but turnips cannot. In harvesting he pulls the root with the left hand, and with knife in the right hand clips it, and one who has been in the habit of pulling and laying them down to be topped afterwards, would be surprised to see how expeditious this is.

He has a basement under his barn, 30 by 114 feet, in which is a large root cellar and stables—and in hauling in, he has only to drive in and dump his cart.

His account of cost of crop of 1859, is:

To plowing, $2—cross plowing, $2—harrowing, $1—drilling, $1—covering dung, $1,	$7.00
To sowing and extra rolling, $2—to 2 lb. seed, 80 cts.—cultivating, 75 cts.	3.55
To 12 days thinning, $12—cultivating, 75 cts.—to 8½ days harvesting, $8.50,	21.25
To 2 days with horse and cart, $3—to rent of land or interest, $6,	9.00
Total expense of cultivating a little over one acre,	$40.80

CREDIT.

By 1,510 bushels turnips, costing, as above, about two cts. seven mills.

Mr. B. makes no account of manure, as he considers that cleaning the land in cultivating the crop a fair offset for the dung the first year. He also makes the same allowance in his corn crops, which cost him $13.25 per acre, which, at 50 bushels per acre, makes his corn cost 26½ cents per bushel. Now at these rates, which is the cheapest feed? And how much will different cultivators vary from this? Very much no doubt. Some will probably grow corn at less cost, and perhaps roots. C.

Jefferson Co., N. Y.

ADVICE FOR THE TIMES.

Secession and depression have been the themes of farmers all winter; they have subscribed for the daily papers, and anxiously read every paragraph on the condition of the nation. We would quote to them an excellent admonition, 3000 years old, "He that observeth the winds shall not sow, and he that regardeth the clouds shall not reap." He that is constantly looking at the course of the political breezes, and scanning the clouds of nullification, cannot attend to his farming. Dismiss all political newspapers, or the nearer to this the better, and then *go actively to work.* The news, when there is any worth listening to, will be sure to reach your ears—it will come to you; you need not go for it. If every farmer attends faithfully to his calling, and raises abundant crops, we shall be sure to have a prosperous country. If prices are likely to be low, raise more; a thousand bushels of wheat at 80 cents will bring as much as five hundred bushels at 160 cents, and the owner will live more cheaply. Nothing is more absurd than to say—"Prices are low; I guess I won't raise much this year." How will this course ever make a prosperous faamer, or give prosperity to the country?

[For the Country Gentleman and Cultivator.]

Nutting's Fanning and Assorting Machine.

MESSRS. EDITORS—Permit me through your columns to call attention of farmers to a trial I have just been giving Nutting's Fanning and Assorting Machine. Like many others, I was somewhat prejudiced against the machine, thinking it advertised to do too much; but after a thorough test, I am fully convinced that it is one of the best, and certainly one of the most needed of Agricultural Implements.

I had, for example, 16 bushels of screenings, (wheat and oats,) which were blown over the sieves in running 125 bushels spring wheat twice through one of the best of the modern fanning mills. In this condition, it was useless to me except for feed, although the wheat in it was among the best and plumpest I had, and the whole was worth probably about 37½ cents per bushel. I run this mixture once through the Nutting Machine in about an hour, with the following result:

I had of good marketable wheat, 5½ bushels, worth $1 per bush.,	$5.50
10 bushels oats, at 30 cents per bushel,	3.00
And one peck wild mustard and pigeon-grass seed,	0.00
	$8.50
Estimating the 16 bushels of screenings at 37½ cents,	6.00
Leaves my actual gain,	$2.50

I then put in a grading screen, and run through a part of the above wheat again, separating it into two qualities, the first of which was the very best of seed.

The trial with winter wheat was even, if possible, more desirable. The wheat was very foul with cockle and wild pea. It was assorted into three grades—the first of which was a perfect specimen of pure seed—the second was about like the average of common marketable wheat, and the last was screenings and broken wheat.

The machine has recently undergone a thorough improvement, through the persevering efforts of Mr. Warren, and from my actual experience, I do not hesitate to say that it is not only the best *Chaffer* in use, but the only machine the farmer should use who has any desire to sow only *clean* and *pure* seed. H. C. FILLMORE.

P. S. One of my neighbors has since tested the machine with grass seed, and says in this respect also, it has no equal. H. C. F. *Manlius, N. Y.*

CARE OF YOUNG PIGS.—A writer in the Ohio Farmer says that farmers sometimes lose young winter pigs by feeding them on heavy, raw, and cold food. They need their food cooked and given warm; a bran and milk mash, and a few boiled potatoes cut fine, are better than richer food, which is apt to scour them.

[For the Country Gentleman and Cultivator.]

RUTA BAGA or SWEDISH TURNEP.

Practical Directions for the Cultivation, Storage, and Feeding-out of Ruta Bagas or Swedish Turnips.

By John Ratcliffe Chapman, C. E.

Difficile est proprie communia dicere.—Hor.

The soil best adapted for the growth of sound, solid Ruta Bagas, is strong loam or strong clay, underlaid by a dry subsoil. If the subsoil be surcharged with water, or if you allow water to stand in the slack places on the surface of the land for the want of a few grips or open drains, the turnips will be hollow, rotten and worthless. Turnips will do well after any crop, if the land be in fair condition, but best after potatoes or hoed crops, on which manure has been plentifully bestowed.

The best course of cultivation is to plow the land in the fall 10 inches deep, if the soil will admit of it, and plow again in the spring before weeds grow enough to hinder the working of the seed planter. Keep the weeds under by the use of a cultivator, and about the 15th of June plow again; then drag extra well, and pass over the roller. If the land be stiff and lumpy, use alternately the cultivator and the roller, till the soil is in fine tilth. A cultivator will bring up the lumps to the surface much better than a drag, and then the roller can have a chance to crush them fine. A solid roller, 18 inches in diameter, is much better for breaking up lumps than a larger one.

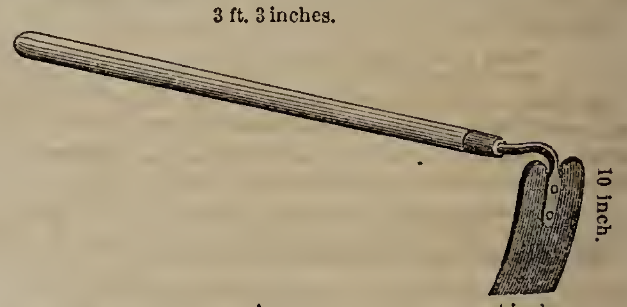
As soon as the soil is fine enough, and it will be as fine as an onion bed, and free from roots and other obstructions to the seed sower, if the above directions be followed, take a span of steady horses and a good plow and *set the ridges.* Now this ridging is easily done, *if you know how*, or have ever seen any one make them, but it is rather blind work upon paper. It is done thus: set the plow so that she will cut about four inches deep; run the first furrrow up the dead furrow, and turn the slice upwards so as to widen and deepen the dead furrow; gee round and make your off horse walk close up to the half formed ridge, and turn this slice tight up to the first one, *and you will have made a ridge.* Haw round and put the nigh horse in the last furrow; then set your plow so that she will cut five or six inches deep, and turn another slice; gee round—set your plow to the four-inch gauge—keep the off horse close up to the edge of the last half formed ridge—turn another slice tight up, *and you have made another ridge.* Proceed in this manner till you have finished, taking care to come out even at every dead furrow. If these ridges be made with a common plow, they will be about two feet six inches apart, center and center.

Now take your lumber wagon and fetch on the rotten manure, which has been previously composted for this purpose. Drive lengthwise with the ridges with two men to a wagon, and drop the manure evenly and carefully between the ridges at the rate of 30 loads to the acre, more or less, according to the need of it. After the manure is all placed, take the plow and *split the ridges*, right and left, so as to cover the manure, at the same time making a new set of ridges, gauging the plow as above directed, and then roll them carefully lengthwise. (As soon as I get the manure on and before I split the ridges, I always sow broadcast one barrel of fine bone dust and one barrel of common salt to the acre, with marked advantage.)

Now take your seed sower (mine is in the shape of a wheel barrow and self-covering, procured of Emery & Co., Albany, price $7,) and put in your seed at the rate of one and a half pounds to the acre. When sowing you must keep your eye upon the seed so as to be sure it is falling regularly. With this machine I can sow an acre in two hours with ease, but where there is much to do I should prefer a Scotch field drill with three coulters, sowing three ridges at once and fertilizers (if needed) at the same time.

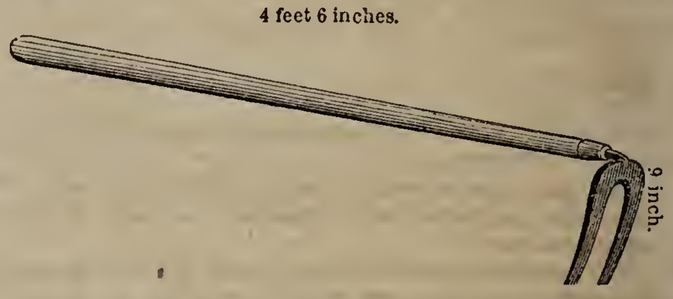
As soon as the young plants are well up, you must watch them carefully, and if you detect the fly at work you must sprinkle the rows with unleached ashes, when the plants are wet with dew in the morning. These ashes will help the turnips, and keep off the fly to some extent. You must repeat the ashing after every shower till the plants are in the rough leaf, when they ought to take care of themselves.

When the plants require hoeing and thinning—(I always let mine stand till they are pretty large, so as to draw one another up for the purpose of *lengthening* the *bulb*)—take a corn cultivator and take out the two outside hind teeth, and then set the frame so that the remaining teeth will cut within three or four inches of the plants—hitch on a horse and go twice in a row. Then take a turnip hoe eight to ten inches long on the bit, cut square across the ridge, weeds, plants and every thing, leaving a small bunch of turnips every twelve inches. Let a boy follow each hoeman and thin out each bunch of plants, leaving one or two plants, according to the judgment or fancy of the owner. An expert will hoe out an acre in a day, and a smart boy will keep up with him. This is all the hoeing and weeding they will require, with the exception of a little hand weeding about the first of September.



Adze.

Ruta bagas ought to be dug up and cured from about the 20th October—certainly before the first day of November, anywhere in Central New-York. I use two implements for digging turnips—one made out of an old cross-cut saw blade, exactly in the form of a carpenter's adze—the other a common turnip drag, with extra long teeth.



Drag.

With these tools two men can dig and bury up 200 bushels of turnips in a day, with the help of two boys to carry them to the heaps. One man goes ahead with the adze and cuts off the tops of the turnips with a single blow; the other follows and strikes in the drag beyond the turnip, and *jerks it out like fun.* It is advisable to cut two rows of tops at once, and bring four rows of tops together, and to drag one row at once and fetch in two rows of turnips together, to make it better for the boys to gather them.

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Rye for Prairie Pasture.—A correspondent of the Chicago Farmer's Advocate, writing from Menard Co., Ill., thinks rye of much value for pasturage in that section. It should be sown in the spring as early as the season will permit, and may be pastured in June, July and August, and plowed up and sown to wheat in September. It should be fed down pretty closely in June, or much of it will head out, and be likely to mix with the wheat. It furnishes excellent pasture for swine, but they should be accustomed to it gradually, and cows yield more butter than from any other pasture he has tried. As a green manure it is equal to clover, and sown thickly, will smother any growth of weeds.

[For the Country Gentleman and Cultivator.]

Products of a Delaware Co. Butter Dairy.

Messrs. Editors—Through the season of 1860 I kept and milked eleven cows, two three year old heifers, and one two year old heifer, fourteen in number:

From which I sold,	3,264 lbs. butter.	
I estimate the milk, butter and cream used in family as,	200	
Total amount made,	3,464 lbs.	
Allowing three heifers to be equal to two cows, I had the same as thirteen cows—average amount of butter made from each cow		266 lbs.

In 1259 I kept eleven cows and one two year old heifer, and two three year olds, and

Sold from them,	2,951 lbs. butter.	
Used in family as estimated,	200	
Amount made,	3,151 lbs.	
Allowing, as before, the three heifers to be equal to two cows, I milked that year also the same as thirteen cows. Average per cow,		242 lbs.

In 1858 I had ten cows through the season, and one cow until Aug. 1, when she was sold, and two 2 year old heifers, and one 3 year old. Estimating the three heifers and the cow that was sold Aug. 1 as equal to three cows, I had that season the same as thirteen cows, and

Sold from them,	2,550 lbs.	
Used in the family,	200	
Whole amount made,	2,750 lbs.	
Average per cow,		211 lbs.

In 1857 milked eleven cows and one 2 year old heifer and two 3 year olds, equal to thirteen cows, and

Sold from them,	2,631 lbs.	
Consumed in family,	200	
Amount made,	2,831 lbs.	
Average per cow,		218 lbs.

In 1856 had twelve cows and two 3 year old heifers, and

Sold,	2,820 lbs.	
Used, &c.,	200	
Amount made,	3,020 lbs.	
Average per cow, heifers and all,		215 lbs.

In 1855 kept twelve cows and two 2 year old heifers, and

Sold,	2,920 lbs.	
Consumed in the family,	200	
Amount made,	3,120 lbs.	
Estimating the two 2 year old heifers as one and a half cows, I had that season the same as thirteen and a half cows. Average per cow,		231 lbs.

In 1854 milked eleven cows and two 3 year olds, and

Sold,	2,611 lbs.	
Used,	200	
Amount made,	2,811 lbs.	
Average per cow, calling the two heifers full cows,		216 lbs.

In 1853 I made over 250 lbs. of butter from each cow kept, but not having any memoranda I cannot give the the particulars.

The greatest average yield of butter per cow in any of the eight successive years was 266 pounds.

The smallest average yield of butter per cow in any year of the same time was 211 pounds.

The general average yield of butter per cow through eight years was 231 pounds.

Farmers sometimes raise large crops, or make large yields of produce of any kind for one year when all the circumstances attending are very favorable, or perhaps partly at the expense of another season, but I have extended this statement over eight years, to show what has been the general average production of my dairy for a long time, and also the yearly yield under every variety of circumstance and season.

There may be some difference of opinion in estimating the relative value of two and three year old heifers in a dairy, but I am quite sure, judging from my experience, that a two year old heifer will not make generally more than half the butter in one season that she will after she becomes six years old, and that a three year old should not be rated higher than two-thirds of a cow. In the above statement, however, I have rated the two year olds as two-thirds full grown cows, and the three year olds as two thirds, or as full cows.

The reason why so large a portion of my dairy has been heifers is, I raise my own cows, and all my heifers come in at two years old. All the cows I milked last season, excepting two, I raised myself, and six of them were all the calves of one cow.

My cows are mostly small in size, and are all of the common breed, excepting the two year old heifer, which is half blood Ayrshire. I value her highly; she came in a little over a year ago, when she was only twenty-two months old, and gave through the season a large yield of milk, and made an extraordinary quantity of butter, yet she grew thriftily and maintained her condition without any extra feed or care, and now promises extremely well for another year. The farmers of this vicinity are indebted to Mr. C. J. Hayes of Unadilla for the introduction of this breed among them. S. L. Wattles.

Siddey Centre, Delaware Co., N. Y., April 9, 1861.

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[For the Country Gentleman and Cultivator.]

Cultivation of the Basket Willow.

L. Tucker & Son—Having read an inquiry in your paper, asking how to grow the basket willow, I herewith give my mode of culture.

Drained swamp or bottom land, is considered the best soil, although almost any kind of moist or sandy soil will produce fair crops of willow.

Prepare the ground by plowing and harrowing, so as to have a smooth even surface—set the cuttings by stretching a line across the plot, and push the cuttings into the soil, leaving one or two inches above ground, the right end up, and eight inches apart in the row—the rows to be wide enough apart to admit the cultivator.

Cultivate and hoe sufficiently to keep down the weeds the first summer. They will need no further cultivation ever after.

If good fresh cuttings are used, and set early, they will make a growth of five to six feet the first summer. They may be set as late as June and root well, but will make a less growth of top the first season.

Cut all close to the ground late in the fall, during thaws in winter, or early spring, so as to have them out of the way of other farm work. Bind in bundles, keeping the butts even, and set up after the manner of setting up corn. Every willow should touch the ground.

In June they are run through a willow peeling machine, and bound in bundles, when they are ready for market. The price per ton was last year, from $100 to $140—fine willow bringing the highest price.

The willow for basket work is cut every year. Some of the coarser varieties are allowed to grow two and three years for hoops. D. L. Halsey. *Victory, N. Y.*

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[For the Country Gentleman and Cultivator.]

DRAINING WITH MOLE PLOWS.

Eds. Co. Gent.—Last season I had some 300 rods of mole ditching run through my lowest land. During the fall it was so dry that no water run from any of them. As we had a heavy fall of snow during the winter, there was but little frost in the ground. In Jan. my ditches commenced running, and now discharge all the water that naturally gathers in the sloughs, making the ground as dry as desired. At a cost of 12½ cents per rod, I now have about twenty acres ready to cultivate at a cost of less than $40. Too much cannot be said in praise of the mole ditchers. They are the thing we need to bring into cultivation thousands of acres of our best and richest soil of Illinois. I understand that the owners of some of the machines offer to run the mole five feet deep for ten cents per rod. C. G. Taylor. *Rock Island Co., Ill.*

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Dry Manure for Corn in the Hill.—In manuring corn in the hill the use of perfectly dry manure is to be avoided, as it will take the moisture from the soil, and thus delay the vegetation of the seed, and, in the case of hen manure and guano, destroy it.

[For the Country Gentleman and Cultivator.]

WEST SPRINGFIELD FARMER'S CLUB.

Report of the discussions of the West Springfield (Mass.) Farmer's Club for 1860–61:

I. Is Stock Raising Profitable in the Connecticut Valley.

Various opinions were advanced upon the subject, some deeming it more profitable to raise their own than to purchase them elsewhere, while others maintained the opposite. It was thought that stock raising might be made profitable if rightly managed. One gentleman estimated that a calf six months old cost him not more than six dollars—that it is best to feed stock different kinds of food daily—cornstalks, cut and mixed with meal, were highly recommended—that it was not best to winter an animal that would not return an equivalent of twenty five cents per day in some form—that a cow consumed from two to three tons of hay during winter, which cost from $40 to $50—that Durham stock are best for milk, Devon for work. Sheep raising was thought to be profitable if we killed all the dogs, and much more so if the dogs kill all the sheep.

II. Is it Profitable to Use Manure in Farming?

The President of the Society said it was a subject which deeply concerned every farmer, but which was altogether too much neglected—that few could tell from actual experience the best metdod of applying manure. The Society decided that we ought to use some absorbing substance to retain the urine—either sand, muck or common earth—and incorporate the manure well with earth to prevent decomposition and the consequent loss of the fertilizing properties of the manure—that manure ought to be covered from rains or exposure to the sun—plaster scattered over the manure prevents the escape of the ammonia, being retained by the sulphuric acid in the plaster—that the nearer the manure is applied to the surface of the land, the sooner the crop will be benefitted. Accordingly it was thought best to spread the manure upon the surface after plowing previous to harrowing, letting the harrow cover it as much as possible. Some spoke of obtaining large crops of wheat by covering the manure with a small plow.

III. Feeding Stock.

All agreed that regularity in feeding was most essential—that it is best to feed green crops as much as possible, either cornstalks, rye or clover. Mangolds were thought to be superior to ruta bagas, although nothing definite has yet been determined. Clover and rowen hay was considered best for milk. It was thought that cattle ought to be carded regularly.

IV. Seeds and their Planting.

Care should be taken not to set plants of the same species adjoining each other, as for example, cabbage and turnips, which were said to have been hybridised in this way, thereby destroying both varieties for cultivation. All seeds should be selected from plants which have become fully matured. Seed potatoes should be chosen from the medium or larger size, all small ones being discarded as unfit for use. Seed corn should be selected at the time of harvesting, and stored high and dry. Corn should be cut and stacked before harvesting.

It was thought that there was danger of covering seeds too deep in the soil, although a case was cited where corn was planted four inches in depth, and the crop improved by it. Some seeds germinate equally as well if scattered upon the surface as if covered in the soil, among which are the clover and turnip seeds, sown soon after the ground has been plowed, or if sown in beds, covering with mats of straw prevents the difficulty experienced by some of the seeds not germinating.

V. The Renovation of Soils.

Barnyard or stable manure is the best fertilizer—irrigation is an excellent method of renovating lands where it can be practiced. One gentleman spoke of planting a few acres of worn out land the last season as an experiment. He first plowed in a light covering of manure, then dropped a handful of ashes and guano, mixed, in each hill before planting the corn. The crop flourished finely, and produced from 35 to 40 bushels per acre. This same land, forty years ago, would produce good crops of wheat, rye or corn, with the aid of a little plaster, while now it seemed to produce no beneficial effect, owing to the vegetable matter in the soil having been exhausted by repeated cropping.

Another gentleman spoke of having renovated a number of acres of worn out land by applying plaster, ashes, guano and manure. This lot now forms a fine fruit orchard, the trees, being seedlings, produce fruit of an excellent quality. All barren or worn out lands, if sufficiently improved to produce clover, can ultimately be brought to a state of great fertility by sowing this seed with rye, and plowing under the clover after harvesting the rye.

Ashes are an excellent fertilizer, for they contain the very substances needed for the growth of the plant. Lime has no beneficial effect upon barren sandy soils, for there is no vegetable matter to be decomposed, and even if there were, it would be readily affected by the action of the atmosphere and descending rains. This is the great difficulty experienced in renovating sandy soils, the fertilizers are so rapidly decomposed, and either evaporate or are washed away. This can be obviated by incorporating a quantity of clay in the soil. Lime, when applied to clayey soils, has a most beneficial effect, neutralizing and decomposing injurious acid substances, and extirpating many hurtful weeds and grasses. It acts also upon the organic or inorganic matter in the soil, decomposing certain insoluble compounds, and bringing them into a state favorable to the sustenance of plants. Joseph Morgan, Sec'y.

[For the Country Gentleman and Cultivator.]

No. 26---THE WHEAT MIDGE.

In an address which I delivered at the recent Annual Meeting of our State Agricultural Society, I spoke of some of our most important injurious insects as having been remarkably diminished or wholly extinct the past summer. I regard a portion of the information given in this address, particularly that relating to the wheat midge, as of such a character that it merits to be widely disseminated among our farmers before the opening of the coming season. I therefore communicate it, with some alterations and additions, for insertion in the Country Gentleman.

It is now about thirty years since the wheat midge first invaded our State. During all that period it has been one of the most formidable enemies with which our agriculturists have had to contend—greatly injuring, and in some instances totally destroying their fields of wheat. Though its depredations have been much greater some years than others, almost every year it has been so numerous as to materially diminish the productiveness of this crop.

The habits and transformations of this insect I will briefly state, as some of our readers may not be familiar therewith. The larvæ, or little yellow worms, which occur in the ears of wheat are so universally known that it is unnecessary to describe them. These worms get their growth about the time the wheat ripens; and when a cloudy, damp day occurs, and the straw is wet with rain, whereby they they can adhere to it, they come out of the wheat heads and crawl down the straw to the ground. Some make this descent before the grain is cut, others when it is standing in stooks in the field, and others which are belated in their growth are carried with the grain into the barn. On reaching the ground they crawl slightly into it, or under any decaying leaves or straws which they find on its surface, and there remain at rest during the autumn, winter and spring. The warmth of this last named season changes it to a pupa, in which state the worm appears as though it had a kind of vest or hood drawn over the head end of its body, with some little cords hanging down in front.

From this pupa the perfect insect or midge comes out in June. This resembles a minute fly or musquito. The reader will form a very good idea of its size, color and appearance by imagining one of the little bright yellow worms which he has seen in the wheat heads, with long and very slender legs and a pair of small wings attached to it. There are two species of these flies found together in our wheatfields. One (*Cecidomyia Tritici*, *Kirby*) has the wings perfectly clear and glossy. The other (which I have named *Cecidomyia cerealis*,) which is more rare, has seven dusky spots on each of its wings. But as we know of no dissimilarity in their habits, this distinction is unnecessary, except where scientific accuracy is required.

Most of these flies are hatched, each summer, in fields where wheat was grown the year before. They remain at rest during the daytime, and become active in the evening. Immediately after they are hatched they are flying about everywhere in search of the fields in which the new crop of wheat is growing. In these fields they all gather themselves in the course of a few evenings, and there remain. They repose during the daytime, standing upon the wheat stalks down near the ground. After sunset they take wing and hover in swarms around the heads of the wheat. The females will now be seen dancing up and down these heads, intently occupied in selecting a place thereon which is suited to their wants. Such a spot being discovered she alights upon it and pierces through the chaff with her sting or ovipositor. This is a hollow tube like a very fine hair, which she protrudes from her body. Through this she passes her eggs, one after another, into the chaff, placing them in contact with the germ or young kernel of grain. When this act is completed the labor of her life is finished, and she soon dies. Sometimes she is so exhausted by this work that she is unable to withdraw her sting from the chaff, and perishes, hanging thus chained thereto.

Long ago I found that these flies began to appear in the wheatfields on the 15th of June, and that they became excessively numerous there, in the course of a day or two afterwards. Yet I knew not but that they might have been hatched one or two weeks before that time, occupying the first period of their maturity in selecting and pairing with their mates, and only resorting to the wheat when they were ready to deposit their eggs and die. How to ascertain when this insect is first disclosed from its pupa, and how long it is occupied in migrating from the old to the new wheatfields is a problem which has been often in my thoughts, without being able to devise any convenient mode for its solution. Last season, however, it occurred to me that as these flies are attracted into our dwellings by the lights therein, it might hereby be found when they first begin to appear abroad and how long they continue. Accordingly, employing my evenings in reading beside an open window, it was on the 13th of June that one of these flies was first seen to alight on the paper before me. Upon the two following evenings quite a number of them were noticed, after which they were seen no more. It hence appears that two or three evenings suffice them for finding their way from the old into the new wheat fields.

It may here be remarked that among the hosts of midges, flies, and other small insects, which enter our windows upon warm sultry evenings, and are so great an annoyance around our lamps, the wheat midge is readily recognized by the bright yellow color of its body. None of our other minute flies which occur in the same situation are of a similar color.

The wheat midge, it is probable, varies somewhat in the time of its appearance, as the season is more backward or forward in different years, for the same atmospheric influences which hasten or delay the advance of vegetation operate similarly and to an equal degree upon the insect tribes, causing each species to come forth at the exact period when its food has grown to be in readiness for its use. And to the south of us, in Pennsylvania, the midge no doubt makes its appearance some days earlier than it does in this vicinity. Hence it is desirable that we have some other indication besides the mere date of a particular locality, by which we may be aware of the time when this insect comes abroad to commence its annual career. And it may therefore be observed that when the first solitary fire-flies are seen sparkling in the evening air, and when the white flowers upon our locust trees are beginning to fade, so that some of them are dropped to the ground beneath the trees, we may be aware that the wheat midge is then newly hatched and is beginning to gather in the wheat fields.

Note.—I perceive that to complete this subject will extend the present article to a length inconvenient for insertion, and I therefore defer my observations upon the disappearance of this insect to another number.

Salem, N. Y.. March 11, 1861. ASA FITCH.

[For the Country Gentleman and Cultivator.]

Homeopathic Treatment in Diseases of Animals.

Messrs. Editors—I always read with a great deal of interest, inquiries and advice in your paper, in relation to the treatment of diseases of domestic animals, particularly that most noble of them all, the horse.

For many years I have used the Homeopathic treatment in my farm-yard, and have found it equally efficacious there as in the human subject, or even more so, owing to the more simple food and habits of life.

A correspondent in a late no. of the Country Gentleman, inquires for the best treatment of distemper in horses. The usual symptoms of this disease are fever, catarrh more or less severe, cough, swelling of the glands, loss of appetite, constipation, emaciation, &c. For these symptoms I use the following remedies: Aconite for the accelerated pulse and staring coat; Belladona for the swelling of the glands; Nux: for the constipated condition—these two latter remedies will also act upon the cough, given alternately. These are all powerful *poisons*, and must *only* be used in the Homeopathic preparations. They can be obtained of any Homeo-practitioner, who will direct as to the quantity and frequency of administration, or a "Veterinary Manual," with suitable medicines, can be obtained of William Radde, 300 Broadway, N. Y., or Boericke's, Chestnut-st., above 5th, Philadelphia.

F. A. Gunther's is a valuable work on the treatment of horses, cattle, swine, sheep, and dogs; but Dr. Hemple's translation from the German of C. Schaeffer, is later and very good authority. Respectfully, your friend and a friend of the brute creation. Senex. *Mansfield, Pa.*

P. S.—The horse should be kept warm and blanketed, in winter season during the distemper, and for a diet, bran mash, which is of a relaxing nature, and what good hay he will leat—a few carrots daily will be useful—oats and corn are too stimulating; moderate exercise daily, when weather is favorable, i. e., dry and not very cold.

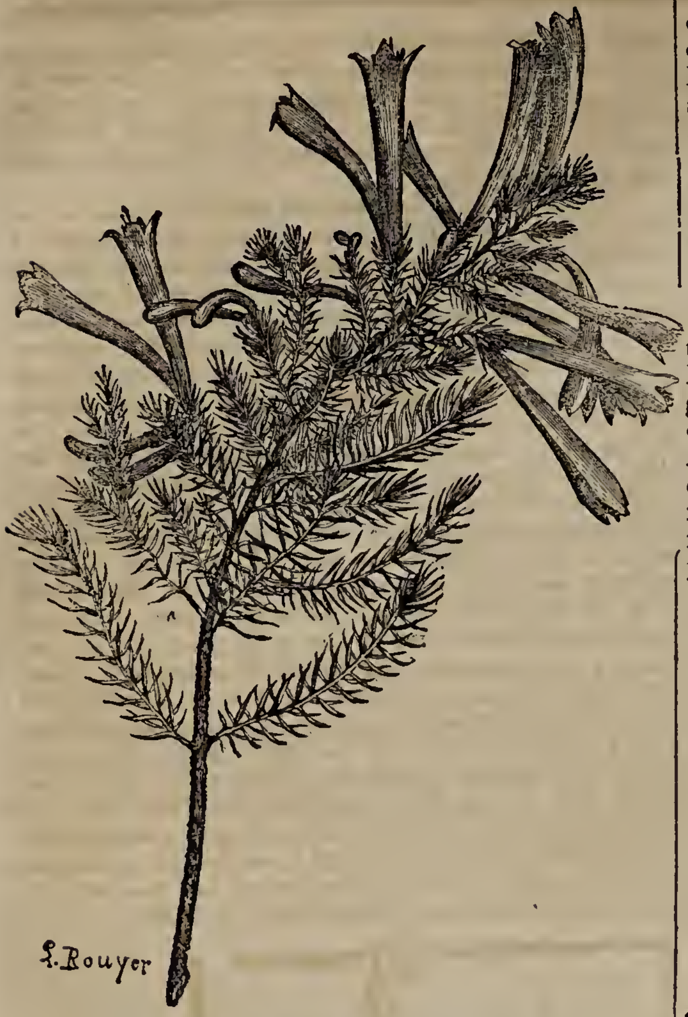
Bad Milk and Butter in Winter.

It is said that when cows are allowed to eat the litter which is thrown out of horse stables, impregnated as it is with liquid manure, their milk and butter will be tainted with the taste, in the same way that the flavor is injured by eating turnips, but to a more disagreeable degree. If litter is allowed to be eaten, it should be only given to other cattle, and not to milch cows, which should have nothing but the sweetest and purest food.

Milk Fever in Cows after Calving.

Messrs. Editors—This disease is caused by drinking cold water after calving, and being in the hot sun. A few days before calving, put them in the shade, where they can have good fresh air. After they come in give them warm drinks for about three days, with a little scalded bran to to keep the bowels loose. When you commence giving cold water, give about half a pailful at a time, and increase gradually until you get the cow up to a full drink. Cows that are allowed to be in the sun and drink what cold water they want after calving, will be very sure to die with the milk fever. I have no objection to milking cows before they come in, if their bags get very full and hard.

Chittenango, N. Y. H. C.



Heaths---the Erica ignescens major.

The accompanying engraving shows the flowers and foliage, in their natural size, of one of the numerous varieties of the Heaths, originally from the Cape of Good-Hope. This species flowers, says the Revue Horticole, in speaking of its culture in France, "in the greenhouse in January and February, and in the open air, from March to June," but the particular variety which is here represented, the *Erica ignescens major* of the gardeners, "is distinguished by larger growth, by leaves somewhat longer and smoother, and by yellowish flowers, *appearing from August to November*. The size of the leaves, the length of the Corolla, its acute divisions, its color of fiery red at the base and pale at the top, render it easily distinguishable from the *Erica curviflora*, which is its near neighbor." The Ericas may be propagated from the seed, or better from cuttings. Their care requires considerable skill, although Mrs. Loudon states that they "are much more easily grown than is generally supposed." The great difficulty appears to be in rightly regulating the amount of moisture supplied to them; in pots, the drainage must be particularly attended to, but "great care must be taken that the roots never get dried up." They require considerable air—"to feel the wind between every leaf." They are also frequently "potted much too low, and thus the collar of the plant is rotted."

REMOVING LARGE TREES.

For commom practice, and with good cultivation, it is now fully established that small trees, well removed, will become larger and better with a few years growth, than when transplanted of large size. In transplanting from nurseries, small trees are therefore selected by skillful cultivators. There are cases, however, where the removal of large trees becomes desirable—such for example as thinning out plantations, or transferring trees from one part of the same grounds to another. To do it imperfectly, or by mutilating the trees in a hasty manner, would be no better than throwing them at once away; a large mass of the roots must be carefully secured, and this cannot be done without conveying with them a large ball of earth. Nor should the operation in any instance be performed on such as are more than three or four inches in diameter, and twenty or twenty-five feet high. The operation succeeds better with evergreens than with most deciduous trees, on account of the more circumscribed and denser mass of fibrous roots. It is commonly performed in winter, with a frozen ball of earth; but if done in spring it is equally successful, and the labor is not one-half that of cutting frozen earth.

One of the simplest and easiest modes of removing the trees that we have met with, is that practiced by W. P. Howland, Esq., of Aurora, N. Y., who has carried evergreens twenty feet high or more, with half a ton of earth on the roots, with the labor of two men and a single horse. A large number of trees were thus removed, and so successful was the work, that, supplied as they were with mellow and rich earth outside the balls, they actually grew more the following summer, than they had for any single year previously.

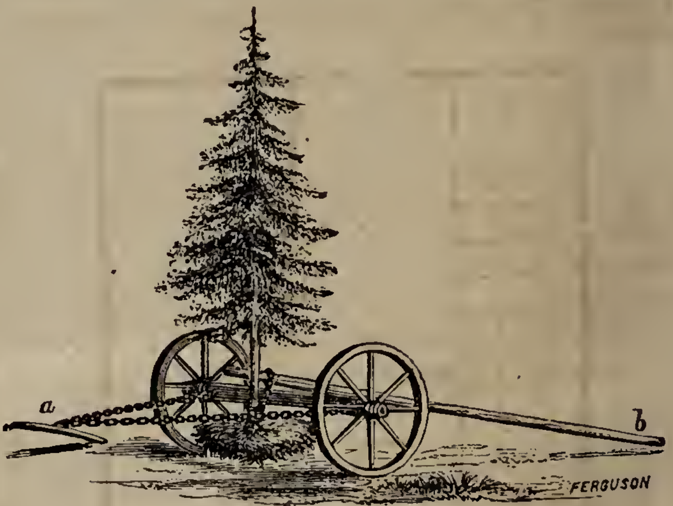


Fig. 1.

The trees are first dug about and are completely loosened. A piece of carpet or thick sacking is then wound about the trunk for a foot or two, to prevent any accidental chafing. An iron ring, shaped as in fig. 3, and five or six inches long, is then fastened to the trunk close to the ground, by passing through it and around the trunk, a broad strip of stout sacking—strong enough to hold the weight of the tree, fig. 4. The hinder wheels of a common farm wagon, with their axle, are then run up near the tree, behind it. Chains attached to the axle, as shown in fig. 1, enable the horse to draw it, when hitched to the whiffle-tree, *a*. The long lever *b*, is then placed upon the axle, which serves as a fulcrum, and the hook at its end, (shown in fig. 2,) is hooked into the ring already mentioned. By bringing down the end *b* of this lever, (fig. 1,) the tree is hoisted out of its hole, as shown in the figure. One man holding the lever *b*, and the other driving the horse, it is carried and deposited at the exact spot desired; it is lowered into the new hole with the same ease that it was raised from its former position. After the digging has been performed, the whole operation is completed in a few minutes, and there is no hard lifting, grunting, nor severe strain of the vertebral column, but all is done with ease, satisfaction, and precision.

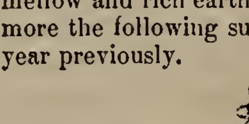


Fig. 2.

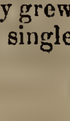


Fig. 3.

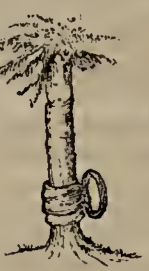


Fig. 4.

Where other trees stand thickly and in the way, the pole may be first set upright against the side of the tree, and both tied together a few feet from the ground; then by bringing both down horizontally, the tree is drawn off without interfering with others. A rope attached to the end of the pole will enable the operator to lower it easily.

A CHENANGO COUNTY BARN.

L. H. TUCKER, ESQ.—Enclosed I send you a plan of my barn, as requested. Its size is 50 by 70 feet, with a porch 16 by 17 feet, and cupola 7 by 10 feet, and 8½ feet high. The main posts are 24 feet, giving it something of an elevation, and a considerable room. Had I used 18 instead of 24 feet posts, the barn would have presented quite a different appearance, and no one would have thought me *wild* in my calculations; yet $25 will cover the difference in the expense, and it gives me 21,000 additional square feet, all accessible and convenient for storage and straw, stalks, &c., and saving the necessity of stacking out, to be destroyed and scattered by wind and storm.

The frame is of pine and second growth hemlock; the covering, floors and partitions also pine. It is ceiled on the outside with inch boards, planed and matched, and rabbited 2 inches wide to the tongue, the boards running vertically. The cornice is what carpenters call a "bracketed cornice."

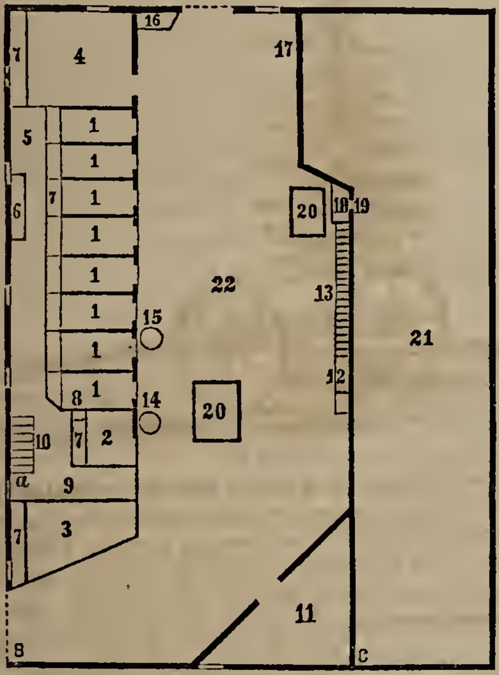


FIG. 1—GROUND PLAN OF BASEMENT—36 by 70 feet, 8 foot walls.. . 1. Stalls for cattle, 4 feet wide, with gates opening into yard, (22.).... 2. Calf stall, 6½ feet square....3 and 4. Loose boxes....5. Walk, 4 feet wide....6. Point where the feed falls from 2d and 3d floors....7, 7, 7. Mangers. 18 inches wide, 14 inches deep....8. Conductor from the provender bin....9. Passage into the yard (22.)....10. Stairs from 2d floor. lighting at a....11. Root cellar....12. Water trough.....13. Stairs for poultry to henery....14. Urlnarium....15. Discharge pipe from the gutter behind horse stalls above....16. Salt box... 17. Droppings from privy....18. Platform at the entrance to henery, 19, seven feet from floor....20, 20. Points where the horse manure is thrown into the basement from the floor above....21. Unexcavated earth forming the floors to the loose boxes and hospital above....22. Yard into which the cattle are turned during the day.

The yard in the basement has a clay floor, but I design to make a concrete bottom. The stalls are four feet wide, and boarded on both sides of 3 by 3 inch scantling, five feet high, between the stalls, and each animal is fastened in by a gate behind it. The walk in front of the cattle is 4 feet wide, and 17 inches higher than the bottom of the mangers, of which it forms the back. The feed is swept from the walk directly into the mangers, and each animal gets its allowance, no more, no less. There are two "loose boxes" for cows when required. The floors are double boards, joints broke, and 3 inches inclination. The basement is enclosed on the north, east, and part of the west sides, with a concrete wall, the remainder ceiled, lighted by seven glazed windows, 3 feet square, on south side and two on the west, and ventilated with pipes 1 foot square leading to the ridge. It may not be uninteresting to state that the thermometer—one of Kendall's best—has generally stood at about 40 deg. in the basement during the winter, and but two mornings below 30 deg. The coldest this winter, while the mercury indicated 16 deg. below at my house, it stood 24 deg. above in the basement. Notwithstanding this high temperature and the accumulation of manure about two feet deep, the ventilation is so perfect that my barn is entirely free from all noxious exhalations, both from the animals and manurial deposits, and I have not had an animal refuse a single feed this winter.

I am often asked, "do not your cattle injure each other while in the yard?" My stock consists of two pairs of working oxen, cows, yearlings and a calf, and all are let out of their stalls into the yard together, and I have not seen even a scratch on either of them this winter. And I suppose my stock are quite as much inclined to use their horns as others, and when first brought into the yard last fall, I watched them with considerable anxiety, fearing that huddled together as they were, "thick as frogs in Egypt," they might injure each other, and the result was "an amicable compromise." We all know the effects of a full stomach and comfortable quarters on man, and it is possible that a plenty to eat and protection from the cold and the storm, will quite as effectually quiet the equally stubborn and vicious natures of the brute. Had it not been for my desire to furnish earth floors for my horses, I might have added 14 by 70 feet to my yard, without increasing the expense. But having once enjoyed similar boxes, and thinking quite as much of my "Morgans," as it is customary for a man to think of his horses, I felt unwilling to deprive them of the luxury now. It may be asked why I have not used the "open stalls" described in No. 7 of the Co. GENT., which are so *fashionable* in this neighborhood. Economy of room was a great inducement for me to adopt them, and I watched the operation of them in other barns with that design, and became convinced that I should not be satisfied with them.

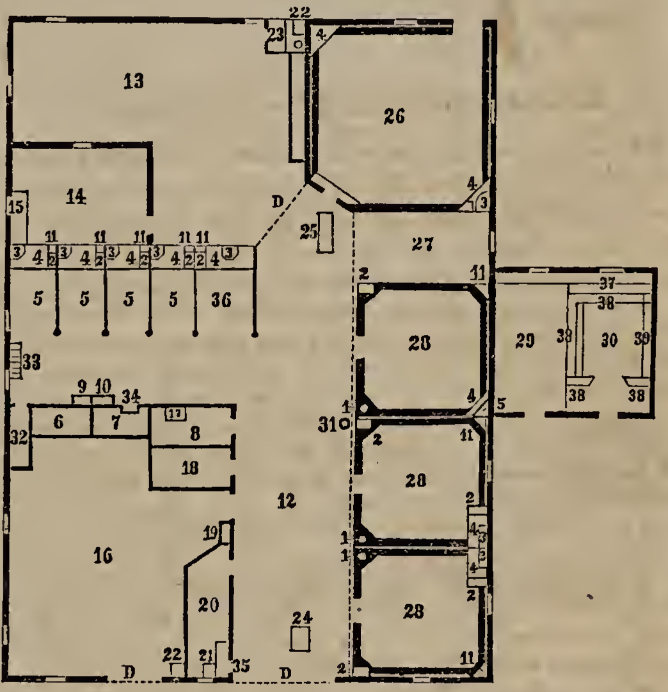


FIG. 2.—HORSE BARN OR FIRST FLOOR—50 by 70 feet, 9 feet between joints.

Figs. 1. Water boxes....2. Feed mangers....3. Spouts for hay, with slats 2 feet at bottom....4. Mangers....5. Horse stalls, 5 feet wide.... 6. Provender bin....7. Oat bin....8. Sawdust bin....9. Opening into provender bin; 10, into oat bin....11. Salt boxes in each stall....12. Floor, 12 feet wide....13. Tool room, 26 by 30 feet....14. Chaff room, 9 by 15 feet....15. Spout, 6 by 1½ feet, leading from floor above to basement, through which feed is thrown, with a door opening into it from chaff room....16. Carriage room 24 by 28 feet, outside measurement....17 and 25. Doors to throw manure into basement....18 and 20. Harness rooms....19. Tool closet opening into 16 and 12....21. Ventilator from root cellar, entering into the main ventilator....22, 22. Main ventilators passing from basement to ridge....23. Privy.... 24. Trap door into root cellar....26. Hospital, 20 by 20 feet, with earth floor....27. Henery, 7 by 14 feet, with earth floor....28, 28, 28. Loose boxes, 14 by 14 feet, with earth floor....29. Garden tool room....30. Ice house....31. Pump....32. Enclosed stairway into basement, with ventilator at top....33. Stairs to threshing floor ...34. Water closet ....35. Dog kennel....36. Stall, 6 feet 6 inches wide, with two feed mangers to be used if required to drive a pair of horses in to feed.... 37. Open space between the ice house proper and siding, 1 foot wide. ....38. Space surrounding the ice, 1 foot thick, filled in with sawdust. ....39. Stone abutment terminating the embankment of earth forming the driveway upon the threshing floor, 11 feet above the surface. ....D D. D. Doors....The windows shown in the engraving are all glazed on this floor and in the basement.

This brings us to the first floor or horse barn. The partitions here are of pine, and *matched*, with the exception of the stalls and boxes. The stalls are double boarded 4 feet high, back to the heel post, and to the ceiling above as far back as the mangers. From the mangers to the heel post above the boarding I have pickets of oak, 2 inches square, running to the ceiling, 4 inches apart. Behind the horses there are ropes furnished with snaps passing from one heel post to the other, to prevent the horse from pulling at the halter, or, if loose, from getting out of his stall and injuring other horses and "raising a muss generally." The loose boxes are boarded up 3 feet high, at which point oak plank resting on brackets projects into the box 10 inches, to prevent the horse from rubbing his tail. From this to the floor above I have used oak pickets 2 inches square, and 4 inches apart. The object of using pickets in place of ceiling are, first, air and light, and second, to give the horses the opportunity of seeing and playing with each other. They are sufficiently near enough together, and strong to prevent them from injuring each other, unless vicious. Across the door, and resting on the rub plank, is a leaf or fall of the same width of the plank. Provision is made for feeding both hay and grain and supplying water from the outside without entering.

The poultry room is ceiled on the sides, has pickets in front, and is provided with nests, perches and suitable ladders leading to the perches. The poultry are admitted to the basement by a door, and to the premises, when desired, by a wicket.

The room for a hospital is ceiled to the floor above and furnished with both a wicket and a tight door, and rub planks. This room is convenient to keep colts, or a breedmare, when not wanted for a sick animal, and is supplied with two mangers. It is also convenient to take a horse when you wish to teach him the way the "world wags." The harness and tool rooms are provided with a suitable number of pins, brackets, shelves, &c. The floors beneath the stalls are grooved and tongued, with a gutter to carry off the urine. But by the use of sawdust for bedding, the gutter is rendered useless. Not a gill has passed into it during the winter. Underneath the threshing floor, and immediately over the stalls, it is ceiled, boards matched, and the space between the floor and ceiling—10 inches—filled in with sawdust to deaden the sound. It will also be observed that I have provided water closets on both this floor and the floor above. Visitors will therefore please "commit no nuisance."

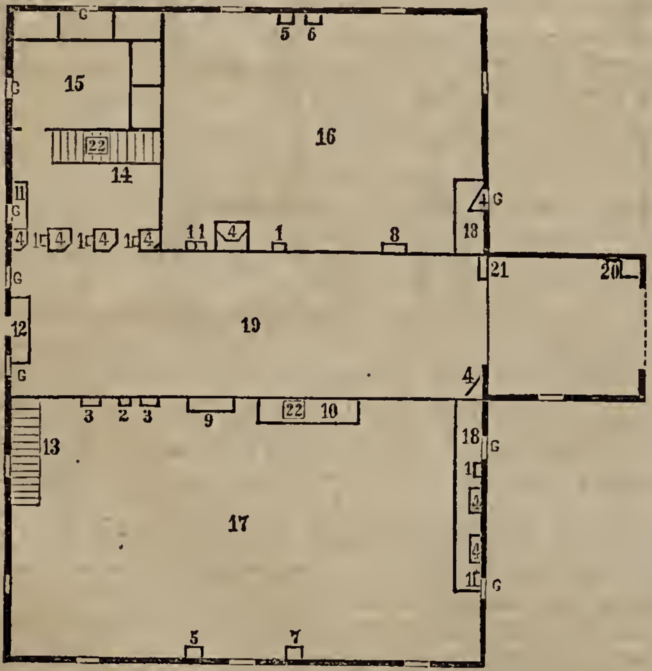


Fig. 3.—Main Floor—50 by 70 feet—Porch 16 by 17.

Figures—1. Mouths of conductors for feeding grain to horses below. 2. Water closet, with conductor to urinarium in basement....3.3 Doors to fill oat and provender bins in story below....4. Spouts for hay leading to mangers below, 2 inches larger at bottom than top....5. Ventilators from basement passing out at the ridge....6 and 7. Ventilators from story below, entering the main ventilators....8. Door into henery below....9. Doors beneath girder, for filling saw-dust bin. 10. Plaster bin, 3 by 10 feet, with scuttle at the bottom through which the contents are discharged into a wagon on floor below, when wanted for use....11. Spout 18 inches by 6 feet, to pass feed into the basement, enclosed four feet above the floor, with ventilator at the top....12. Stairway from below....13. Stairs leading to loft....14. Stairs to cupola....15. Granary, 13 by 16....16. Bay, 26 by 34....17. Bay, 28 by 50....18. 18. Passages for feeding horse boxes and hospital....19. Threshing floor, 16 by 50....20. Ventilator from ice-house....21. Windlass to hoist hay riging to the ridge of porch when not in use....22. Trap-door beneath the stairs, through which the hay and straw falls from the cutter into the chaff-room below. The windows on this floor which are marked G, are glazed—all the rest have blinds only.

The threshing floor is grooved and tongued. The embankment for driving upon this floor is of earth excavated from the basement. Grade 1 foot to 12. The floors beneath the bays are of pine boards lined with five-eighths inch pine, joints broke, and nailed with 12d nails into each joice. Each stall and box can be fed with both hay and grain from this floor.

For the manner in which my plans have been carried out, and the neatness of execution, I am indebted to my builder, R. W. Akerley, Esq., of this place, who has done nearly all the work, and I feel confident that it is done in a substantial manner.

The barn contains a trifle over 100,000 feet of lumber, and cost, including painting, $2,192.28. If built of rough boards, and put up in the kind of tumble-together manner in which barns are generally built, regardless alike of style or order, Mr. Akerley thinks it can be completed for $1,200, including basement.

Your visit and lecture at our place seem to be producing good fruit, and will be held in grateful remembrance by our little Club for years to come. And we shall look forward with pleasing anticipations to the time when you fulfill your partial promise to visit us again, and be assured I shall cheerfully fulfill on my part, and devote a week, or more if consistent with other engagements, with my team, to "showing you up" through the dairy regions of this and Delaware counties. A. J. Sands.

Bainbridge, N. Y.

Errors and Requisites in Making Butter.

[We have been obliged to condense somewhat the following valuable communication from Mr. Shattuck. Eds.]

Editors Co. Gent.—It is often remarked that good dairies cannot be made without good dairywomen, and I take the liberty to assert that it cannot be done by the best dairywomen in the world, unless provided with the necessary conveniences. I would like to see the dairywoman having skill enough to make first quality of butter from milk drawn from cows whose temperature has been raised to fever heat by fright and running, yet dairymen sometimes expect this; and will buy the poorest cows, give them about half enough to eat, furnish a very poor milk-room, other fixtures in proportion, and then find fault with their good wives, for not making better butter and more of it.

On the other hand, there is one fault peculiar to the dairywomen of the country, originating in the fact that each thinks she makes *the very best butter* that is made any where. Consequently the husbands are censured for not getting as much by two or three cents a pound, as some other man does. If I can ever be forgiven by dear women for saying this, (and I know their charity is boundless,) I will tell them how to remedy this bone of contention. Never allow a butter buyer an opportunity to find fault with your butter, but tell him before he sees it, "that if it is faulty you would be pleased to have him tell you the whys and wherefores, and you will in future apply the remedy." My word for it, you will make it pay in the end, to do so.

As to the cows I make it a point to get those with a good yellow skin, the quality of the milk being very essential in the making of good butter, that of a fine yellow color always having the preference, and such butter cannot be made from cows with pale colorless skin.

The next point is, food for the cow, which should be of the best quality, and plenty of it. The pasture should be where there is abundance of good sweet feed, with a plentiful supply of water. The quality of feed has much to do with the quality of butter.

The milking should be done with neatness, the milk room should be in a good cool place, properly ventilated, and every thing about it kept clean and sweet. I prefer to have the milk room above ground, as I think the cream rises better in most kinds of weather, than it does in cellars. We use tin pans placed upon racks for setting the milk, letting it stand a sufficient time for the cream to rise, which is generally in warm weather about thirty-six hours, but I think that it requires great care and good judgment on the part of the dairywomen, to see that the milk does not stand too long before it is skimmed, as for instance, in very muggy hot weather. Before thunder-storms the milk will sour very soon, and if it is not attended to at the proper time, you will be very likely to have a poor churning of butter, which injures the sale of a dairy very much. Hence the state of the weather and other circumstances must govern you in regard to the time you allow the milk to stand before it is skimmed. The cream taken off at night should be set in a cool place in the cellar, and churned in the morning.

Now for the churning process, which requires judgment and skill in regard to temperature of cream. My experience is, that in warm weather it should be about fifty-five degrees fahrenheit, but the general opinion is from sixty to sixty-five degrees; that I think too warm, though much depends upon the place and state of the atmosphere where you are churning. The cream naturally grows warmer by churning, especially if the air that is thrown into the churn is warmer than the cream, and the reverse—if the atmosphere is colder than the cream, it would grow cold. You should be ruled by circumstances in this matter also. When the butter comes, it should be taken from the churn and the buttermilk worked out. We prefer to wash with cold water, thinking that we can remove the buttermilk with less working than without the water. Then it should be salted with good pure salt, about one ounce of salt to a pound of butter, thoroughly worked in, then covered to exclude the air, and set in a cool place for twelve or twenty-four hours; when it should be worked again sufficiently to free it from buttermilk. The moment that is done it should be packed in the firkin and covered tightly to keep it from the air, and when the firkin is filled it should be covered with a cloth and a strong brine made of salt put on the butter, and kept so until it goes to market.

I repeat the assertion that it requires good judgment and skill to manufacture a fine article of butter, but the cost is no more than an ordinary article, and not as much as a very poor article. Butter will absorb impurities quicker probably than any other article; hence it should be kept away from all impure or strong scented substances if you would keep it from getting tainted with bad odors.

One error in butter-making is over-working, which leaves it salvy, and destroys the grain, lessening the price very much. Another is not working enough to remove the buttermilk, which renders it unsaleable. Another is not salting enough, while others salt too high; another is a cheesey substance we sometimes find in cream and butter, which makes it very unpalatable and injures the sale. All these defects should be avoided, and I think can be with proper attention.

One great beauty of a dairy is to have it as nearly alike as possible, uniformly of the best, through the season, which can only be done by the greatest care and attention. Ice is very necessary in most localities, especially in the warmest part of the season. Some very fine dairies frequently have what is called "warm weather butter," which injures the sale of the whole very much. What I mean by this is, that in the hottest weather, unless you have ice, or very cold water, the butter will come soft, and it is very difficult to make a fine article.

Without wishing to detract from the credit of Chenango County butter, I think a large quantity of it might be improved from two to five cents a pound, which would well repay extra labor. I desire to advise young women who think of working in a dairy, to learn to make a fine article if they have not already done so, and if they cannot learn effectually without, it would pay them well to go in some place where they know how, and give one summer's work to learn, in increased wages afterward, and eventually in winning golden opinions for their husbands.

I will guarantee any one's success who follows the rules laid down, always to attend to every branch of the dairy, just when it requires attention, and to watch the markets closely, making it always a point to sell when buyers are anxious to purchase. If I have failed to give you a satisfactory answer, as to my good luck in the dairy business, I hope some one more competent will take up the subject and do it better justice. JOHN SHATTUCK.

Chenango Co., N. Y.

[For the Country Gentleman and Cultivator.]

"CHESTER COUNTY BUTTER."

The best butter in this country is admitted by connoisseurs to be made in the dairies of Chester and Delaware counties in Pennsylvania, from meadows a hundred years in grass, and which the owners never think of plowing up. The sod is said to be a foot thick, and consequently little affected by drouth. This butter is appropriated by the markets of Philadelphia, Baltimore and Washington, and a person once accustomed to its aroma and flavor, becomes fastidious for life in that article.

The dairy-people work their butter with a damp cloth, upon a marble or hardwood slab, (instead of a bowl and ladle,)—rinsing and wringing the cloth in cold water as often as it becomes saturated with the milk. The butter will not become waxy or salvy by this process, as it is made perfectly dry, with half the manipulation. A single trial will convince of this. Of course the butter must be salted and cooled, and time allowed for the salt to be entirely dissolved, before it is worked for packing, or for the table. The cloth must be close in texture, and not at all linty—a lump of ice will prevent the butter becoming oily in very warm weather. An ounce and a half will be found about the right quantity of salt for a pound of butter by this process, as the cloth extracts more salt than the ladle.

Mansfield, Pa. S. E. M.

[For the Cultivator and Country Gentleman.]

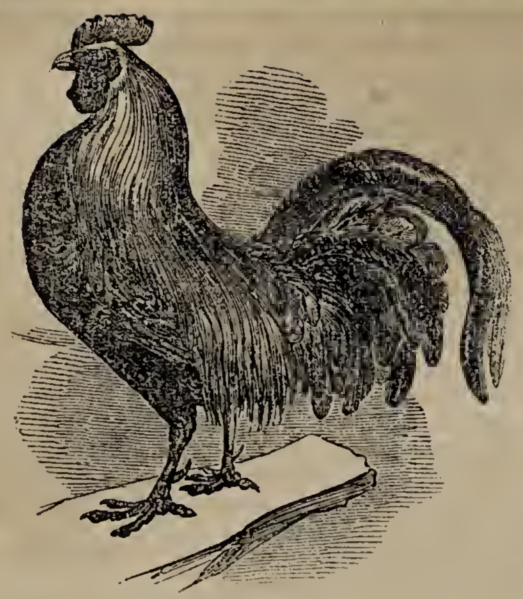
Best Mode of Raising Early Tomatoes, &c.

Start the seeds in a box of moist earth, and when the plants are about two inches high, transplant them into a turnip, scooped out and filled with fine, rich mould. Set them out in your hot-bed, and when the spring frosts are past, remove them to the garden. This is better than making a basket for the roots, as sometimes recommended, as the turnip decays and nourishes the plant. Tomatoes are benefitted by an early transplanting, which causes them to throw out more roots and grow "stocky." Do not pinch out the centre shoot, unless you wish a succession of lateral suckers all the season. If you start the seeds in a hot-bed, the plants should still be moved, if only an inch or two, in the bed.

Of cucumbers, melons, Lima beans, and other tender plants that suffer from transplanting, the seeds may be planted in the turnip, and then treated as recommended in COUNTRY GENTLEMAN, (March 7, p. 159.) Sink the turnips in the soil or they will dry up, or you can keep them in the house in a shallow box, surrounded with earth or damp moss. M. *Mansfield, Pa.*

Poultry Cheaper than Pork.

A lady correspondent of the Homestead, has kept an accurate account with her hens for several years, and comes to the conclusion above stated. One year she kept hens "worth $39.96, at a cost for food of $39.81—total $79.77. These hens produced in eggs $34 92; in manure $5; in stock at close of the year, $50; total $89 92, leaving a profit of $10.15." Over and above this profit, she adds—"I used in the family during the year, ninety-one chickens and fowls, weighing about 300 pounds." "Another year, keeping more fowls and eating less, she made a still larger profit, while her pork raising cost over 5 cents per pound." No doubt that poultry properly managed, pay a larger profit than almost any other domestic animal.



THE ENGLISH GAME FOWL.

No satisfactory information seems to be accessible now, by which to pronounce with certainty on the origin of this breed. It is certain, however, that in India an original race of fowls (Bankiva) exist at the present day, bearing all the peculiar characteristics of the species, in full perfection; and the probability therefore is, that these fowls aro natives of India. The natives of India, it is well known, are infected with a passion for cock-fighting. For this barbarous purpose these fowls are carefully bred, and the finest birds become articles of great value.

But whatever may have been the way in which the game fowl was carried into England, it has long been there cultivated with such care, and has attained such perfection, that it has been by some naturalists expressly denominated " The English Game Fowl."

The flesh of the game fowl is white, juicy, and superior in richness and flavor to all others; their eggs are small, fine shaped and delicate, with dark or yellowish shells. But these are not the fowls for the farm; they are extremely quarrelsome—even the chicks will fight till they are stone blind, before they are fairly feathered.

As sitters, Game hens have no superiors. Quiet on their eggs, regular in the hours for coming off and returning to their charge, and confident, from fearless disposition, of repressing the incursions of any intruder, they rarely fail to bring off good broods. Hatching accomplished, their merits appear in a still more conspicuous light. Ever on their guard, not even the shadow of a bird overhead, or the approach of man or beast, but finds them ready to do battle for their offspring; and instances are on record where rats and other vermin have thus fallen before them. C. N. Bement.

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[For the Country Gentleman and Cultivator.]

Management of Cows after Calving.

Messrs. Editors—I suppose that opinions differ, as to the management of cows, immediately after dropping their calves, as well as in many other things. Some give them little or nothing to eat, for twenty-four hours after calving, while others adopt a different course. The fasting theory is, that nourishing food induces caked bag and milk fever. Now I think this depends very much upon the previous keeping. If cows have been kept poorly until calving time, or nearly to that period, a sudden change from poor to very nourishing food might be injurious. But when they have been well kept through the winter, and their feed increased or made a little better for a week or ten days before calving, I think little or no danger need be apprehended from treating them generously, immediately after calving, or that no change need be made either in quality or quantity of food. *Cold water*, in my opinion, is worse for them than nourishing food.

I never have had any trouble with my cows' bags—never had a case of milk fever or caked bag—any thing more than the ordinary thickening up at the calving time—and my treatment is this:—Keep well through the winter—make the feed better, by degrees, a few days before the cows come in, and within an hour after dropping the calf, give a pailful of warm drink, made by scalding three quarts of *bran*, (not meal,) and filling the pail with cold water, so that it shall be lukewarm. This drink, or clear water with the chill taken off, as the cow may require, is given for two days—no *cold* water being allowed. I make no other change in their diet. They are fed hay, meal and roots, regularly as usual. I am always very careful to keep them from cold winds or storms for three or four days, watering them in the stable, if the weather is bad. I also invariably anoint the bag at the first milking, with an ointment made of the bitter-sweet and lard or fresh butter simmered together—this is softening and beneficial, if there should be any inflammation. I feed salt and soot once a week at all seasons. There is more danger from sudden changes in feeding, than from almost any other cause. Starvation and repletion, by jerks, don't agree with the animal system. Care should always be taken to avoid taking cold. Cows that do not come in until after being turned to pasture, should have a portion of their milk drawn daily, if their bags become very full and hard. J. L. R. *Jefferson Co., N. Y.*

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[For the Cultivator and Country Gentleman.]

SOWING CORN IN DRILLS.

I wish to add my testimony in favor of the above mode, in preference to broadcasting. We tried both in 1860, on the same kind of land, side by side. For some weeks there was little apparent difference. It all looked small and spindling, as sowed corn often does, until when about six or eight inches high, we ran a light corn plow between the rows, throwing the earth towards them on each side. The effect was directly visible. The drilled corn shot ahead, and never ceased growing and thriving until in August we were constrained to cut the chief part of it up to prevent its *going to seed*, as it had tasseled out splendidly, and was setting little ears in profusion.

We had trouble in curing it, it was so full of juices, and the rain came on just as we had cut it. Query, what is the best way of curing corn-fodder?

By cutting rather high for green fodder, we had a second growth from the part cut first. The part sowed broadcast looked and yielded as usual. We thought the drilled part yielded double in amount from the same area.

The drills were run out with a light plow three feet apart, then sowed by hand about fifty grains to a foot.

Mansfield, Pa. M.

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[For the Country Gentleman and Cultivator.]

Varieties of Spring Wheat---Time to Sow.

Messrs. Eds.—In the Co. Gent. of March 21, your correspondent, John R. Prince, makes inquiry in regard to the best time to sow spring wheat to escape the midge, and adds his experience with the same. In answer, I would say that to escape the depredations of the wheat midge, more depends upon the variety of wheat sown, than upon the time of sowing. The Canada Club is an early variety, and cannot be safely sown in midge infected regions. I have known several attempts at growing this variety of spring wheat hereabouts, where it was so destroyed by the midge as not to be worth harvesting, and was left uncut. The Fife wheat is a later variety, and generally escapes the midge, but is often considerably shrunken from rust or other cause. The "China Tea," (spring wheat) is a late variety, and unless sown *very early*, will continue to grow so late, that before the formation of the grain, the midge will have had their "day," and gone for the season. It is generally sown from the middle of April to the 10th of May, but good crops have been grown here both earlier and later than that. It is a "rank grower," and for its many other good qualities has nearly superseded all other varieties, at least in this locality.

East Shelby, Orleans Co., N. Y. I. I.

VARIETIES OF CLOVER.

In our recent article on the Clover Plant, (Co. Gent., March 21, 1861,) we gave some account of the more common different varieties in cultivation, but have since observed a more extended notice of the subject in the Boston Cultivator, which will further inform those interested.

"The only species of clover in general cultivation in this section, is the common red—*Trifolium pratense.* But of this there are two well-marked varieties, known as the northern and southern—the latter sometimes called western. It appears to be what some writers call the *Trifolium medium.* The northern is much the largest in growth, the stalks being sometimes three or four feet long, and as coarse as pea-vines. The southern grows scarcely to half the height, matures much earlier, makes more blossoms, and ripens more evenly than the northern. The second growth of the same season is usually more abundant than with the northern, often nearly equalling the first, and being generally preferred for seed. From the fineness of the stalk it makes better hay than the northern, and is more easily cured, while the quantity it will produce in the whole season is not much if any less."

In regard to the Italian clover, it will be seen that its estimate differs from our own. We have never grown it, but based our description of its characteristics on the experience of correspondents of the New-England Farmer, one of whom had grown it we think two or three seasons. Of "other kinds of clover that have been tried here," the Cultivator remarks:

Other kinds of clover have been tried here. The Italian or Crimson clover—*T. incarnatum*—was introduced several years ago, and the writer made some trials with it. For ordinary field culture it proved entirely too tender. It is quite pretty and interesting as a garden flower. The "Bokhara or tree clover," much vaunted several years ago, is a species of Melilot, akin to the common sweet clover. After a short run as a curiosity, its cultivation was universally abandoned. The Alfalfa clover, from Mexico, California, &c., is identical with lucerne—*Medicago sativa.* The Alsyke clover, which appears to be the newest thing in this line, considerably resembles the common white—*T. ripens*—and may be a *sport* from that species. It also resembles an indigenous American species, called in the West "buffalo clover." We have seen it in England and Scotland, but several farmers in the latter country assured us that it was not sufficiently hardy. Its want of hardihood will probably prevent its coming into general use here. The common white grows spontaneously to such an extent here, that there is seldom occasion to sow it. The perennial clover—*T. perenne*—or "cow-grass" of England, we have never seen in this country. It grows in Britain in situations which are quite unfavorable to common clover; as on stiff clay, hard road-sides, and where only a slight depth of soil overlies rocks. The leaf and flower resemble common clover, but the stalk is of smaller size, and it appears to be better relished by cattle. It might be well to try this species on some of our pastures.

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[For the Country Gentleman and Cultivator.]

How Superphosphate of Lime is Made.

Eds. Co. Gent.—During a visit to Boston last week, I had an opportunity of visiting Coe's establishment for the manufacture of Superphosphate of Lime, and knowing that many of your readers use it largely, I thought that a few notes in regard to it, might not be out of place at this season.

Mr. Coe introduced me to his working chemist, Mr. J. M. Gallacher, who is ingenious and enterprising, having just patented a process of collecting, condensing and using the ammoniacal and other gases which usually escape and poison the air for a long distance around a bone factory—thus not only preventing them from becoming an intolerable nuisance, but turning them to a good account in the preparation of the superphosphate; inflammable gases, which are not condensed, are burnt under the retorts. Mr. Coe spent several thousand dollars in advertising for old bones, before the collectors began to bring them in. They now receive them from all parts of the country, and use about one hundred tons per week. The bones are assorted into hard and soft. The soft bones are ground, screened, and the finest parts barreled and sold as ground bones, or bone dust, to be used as top dressing. The coarser pieces are, with the *hard* bones, thrown into the retorts, of which there are fifteen, and exposed to an intense heat for five hours, then ground coarse and screened—the dust being used for the superphosphate, and the rest sold to the sugar refiners. This eventually comes back, is reburned and ground, and is then ready to take its place in the mixing house where we will go. Here we find large cisterns of fluid animal matter, distilled from the bones in the retorts in the other house, condensed and brought through several hundred feet of iron pipe. A certain proportion of this liquid, sulphuric acid, and the burned bone dust, are mixed in suitable tanks. The acid immediately attacks the alkali of the bones and fluid animal matter, causing a strong effervescence, which is promoted by frequent agitation, until the whole becomes a thick, pasty mass. It is then subjected to some further manipulations, dried, put in bags, marked, as is ready for market, where it meets with a ready sale, as it is most deservedly popular with every one who has tried it.

Mr. Gallacher informed me that they were about making some improvements in their retorts, which would enable them to run their establishment at its full power all the time. The condensation of the ammoniacal and other gases, formed by burning the bones in close retorts and returning them again to the bone dust, with the sulphuric acid, appeared to me to be an improvement of the greatest consequence to all who use artificial manures. A certain percentage of ammonia is thus added to the superphosphate, which every one knows hastens the growth of the young plant, while the lime itself is in no way injured in the permanent effect claimed for it.

I used a large quantity of the superphosphate last year, having made quite a number of experiments with it, alone and in connection with other manures, and came to the conclusion that I could buy nothing better for any crop I raise. Having seen the whole process of manufacture, from the purchase of the bones to the perfect article, I feel a confidence in the purity and efficiency of it, which I did not before, and shall use it this year more liberally than last. Thos. E. Hatch. *Keene, N. H.*

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[For the Country Gentleman and Cultivator.]

RHEUMATISM---BOILS.

The following was published in The Cultivator in 1835, and having proved its efficacy many times, I think it would be a favor to many of your readers to have it republished:

"Take 1 gill of alcohol and 1 gill of spirits of turpentine; mix them in a bottle, and add an ounce of camphor. Apply this compound by rubbing thoroughly with a piece of flannel the part affected three nights in succession, then omit three, and so on, till a cure is effected. It is a powerful medicine, and if it should affect the stomach, take a small quantity of brandy, ginger tea, or something of a like exciting nature."

This is for Rheumatism, and I know from experience that it is an excellent remedy. I have also used it for boils as follows:

When I discover a boil begin to break out, (as its peculiar appearance and the burning pain will indicate what it is,) I immediately apply a drop or two of the linament and continue to do so occasionally until it disappears, which is generally in a day or two. I have used it many times, and have never had it fail. D. G. Williams. *Vermont.*

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[For the Country Gentleman and Cultivator.]

How to Purify Rancid Lard.

Messrs. Editors—Having derived both profit and pleasure from many of the recipes which enrich your columns, I imagine the following will do your readers no harm. We had some 40 lbs. rancid lard, which was valueless as it was. Knowing the antiseptic quality of the chloride of soda, I procured 3 ounces, which was poured into about a pailful of soft water, and when hot the lard added. After boiling it thoroughly together for an hour or two it was set aside to cool. The lard was taken off when nearly cold, and was subsequently *boiled up.* The color was restored to an alabaster white, and the lard was as sweet as a rose. O. C. C. *Marshal, Mich.*

[For the Cultivator and Country Gentleman.]

FEEDING HORSES.

As N. H. C. has taken the liberty of asking a reply to the following questions through the Co. Gent.—"Can a horse that is moderately used, be kept in good condition when fed on oats *alone*, at a less cost than on hay alone, and what quantities of each will a 900 pound horse require when fed exclusively on either kind, and what is the most economical way that such a horse can be fed, and kept in good working order,"—I take the liberty of replying to the best of my ability. In reply to the question, whether "a horse that is moderately used, can be kept in good condition on oats *alone*," I answer, perhaps for a very short time, but soon he will be "oat-killed," i. e. a gradual wasting away. Upon "hay alone," his sojourn on earth will be prolonged, depending upon the capacity of his stomach, which before many days will become enlarged to an enormous size, and of course it will take time to fill this receptacle, thereby losing money, as the old adage tells us "time is money." The reason that horses are sometimes killed by eating "oats alone," is that the food is in too concentrated form, and the stomach *must be* expanded that the pressure upon it may (as it does) cause a flow of gastric juice, which is necessary to promote digestion; but when feeding "hay alone," the horse is obliged to eat a large quantity which must be digested, or rather (to be correct) reduced to a pulpy mass so that *certain* parts can be taken by the lacteals to the blood vessels, and by these into the heart, and from these into the lungs and converted into blood. We readily see how much useless work the stomach performs in reducing (as it is obliged to,) a large portion of food which does not enter into the system as nourishment. The remainder of this passes out through the bowels as refuse. We here have the two extremes, and by uniting them form a happy medium, containing what is just right—the hay to cause the flow of gastric juice, &c., and the oats to furnish the *larger* share of food. In all food the constituents are generally the *same*, but in different proportions, and therefore a mixture is necessary to supply the blood with all these constituents, and in the right proportions for the formation of each and every part of the body; and it is the feeding day after day, and year after year, the same food to a horse, that gradually but surely weakens the system and causes a "hankering" for a change, and then very likely our wise stable-boy *knows* that the ill treated dumb brute has the "*bots*," and then, as a matter of course, all of the most noxious drugs are poured down the poor animal's throat with artistic skill, showing itself in every turn of the hand, telling to us "*that practice makes perfect*." Another reason why horses need nearly the same constituents, and in the same proportions, even after they have attained their growth, is that the body is continually undergoing a change, and the muscles, bones, &c., are being renewed at all times, and the refuse from them passes off through the bowels. If horses were properly treated, there would not be any need of turning them out to pasture to recruit their broken down health; in fact, I am decidedly opposed to "*pasturing*," although perfectly delighted to watch the merry twinkling of the eye, as he gets a bite of grass to nibble, without being tormented by the flies.

As to the gentleman's question concerning the right proportion of food for his horse, it is rather difficult to reply satisfactorily, as horses, like men, differ in regard to the amount of food which will keep them in "good working order." A pony built horse, no matter how large, will keep a better coat of flesh upon his ribs, than a small, slab-sided, open gaited horse, even upon less food. I prefer to regulate the amount of food so that it will keep the horse "*feeling well*;" as too much is not assimilated, but merely passes through the stomach and bowels, as the appearance of the manure of a horse fed nearly all oats and but little hay, testifies.

I have two horses, one 15 hands high, and will weigh 900 pounds or so, close ribbed, short body and legs, who will only "muss over" ten pounds of hay and eight quarts of good oats per day, and upon that feed will work hard, look well, feel well, and carry a good coat of flesh upon his ribs. The other is 15½ hands high, will weigh 1,100 pounds, big head and ears, long body and legs, and after eating his satisfactory 18 quarts of oats, and what hay he likes, (I dare not compute,) will neigh for *more* yet. Twelve quarts will suffice and enable him to work moderately and feel well; but as for carrying a coat of flesh upon his ribs, oats or hay in *any* quantity cannot do it.

Having answered the gentleman's question as well as I can, I will give him the way I have done, and am now doing. For horses "moderately used," oats and hay are preferable, in proportion (depending somewhat upon the horse, as stated above,) as 12 pounds of oats and what hay he will eat, (which will not be much, as grain decreases the appetite for hay,) per *day*, in three feeds, morning, noon and night, and about twice or three times a week, give once a day, and that at night, roots of some good kind; carrots are perhaps the best, but parsnips, turnips, apples and potatoes are good, but I would be careful of the two last, and prefer to give only a few at a time, as colic and they are great friends.

If roots cannot be had conveniently, I would give as a substitute a bran mash, which operates upon the bowels, keeping them in good order. It is made of wheat bran and boiling water—say six quarts of bran, and as much water as will dampen it; cover it and let it steam, and give it as warm as possible without burning the mouth of your horse, who will "dive" into it. A few roots would improve it. A change from oats would call for cut feed; that is, hay cut short, and meal made of corn, rye, or most any grain, ground fine, and enough water to cause the meal to cling to the hay. This feed, on account of the water, I prefer to give at night; it is also a heartier feed than oats, and of course preferable when the horse is working hard—although upon the grain used depends the nutriment. Look closely to the stable as regards the comfort of the horse, as it exercises a great influence upon him; and remember that cleanliness is secondary only to food.

Be regular in feeding, and if possible in work. Don't tamper with drugs. ONE WHO HAS TRIED IT.

A GOOD COW

MESSRS. TUCKERS—According to promise, I give you the weight of my full-blooded Hereford cow. Live weight here, 1732 lbs. Live weight after being driven to Seneca Fall, and 12 hours off food and water, 1684 lbs.

Dead weight, beef,	1104 pounds.
Tallow,	217 do.
Hide,	90 do.
	1411 pounds.

You will see she was nearly 66 per cent. of beef to the live weight, and a mere trifle less than 84 per cent. of beef, hide and tallow, which is the greatest per centage I have heard of. She was only of small bone and frame, but the most weight for the same bulk I have seen. I sold her for $12 per 100 lbs., New-York city weight—say sinking offal.

I have owned only three Herefords, but from what I have seen of them, I think they will make more fat for the feed than any cattle I have fed. I would like to get a pair of steers from two to three years old, and as large frames as that breed affords, and I would try what they would make on a given quantity of feed. I have a grade Hereford and Durham, not yet four years old, which weighs 2260 lbs., very handsome. He is not yet very fat, but intend him to be so next December. The cow was raised from the importation of the Hon. Erastus Corning, and W. H. Sotham, Esq. I think it is a loss to the State that the breed were not more appreciated by the farmers, as they are certainly an excellent breed for making beef. I sold her to Messrs. Smith & Co., very gentlemanly and enterprising butchers of Seneca Falls. JOHN JOHNSTON.

Near Geneva, March 23, 1861.

[For the Country Gentleman and Cultivator.]

HOW TO GET MORE LAND.

Many a farmer can become possessed of more land than he now has, by other means than buying it. Paradoxical as this proposition may sound, it is, nevertheless, to all intents strictly true. We repeat, that for all agricultural purposes, the farmer may as a general thing increase to a considerable extent the available area of his land—that is get more land—without acquiring it by purchase. He need not steal another farm, nor set the one he has up on edge and cultivate both sides of it. But if he render useful every foot of soil that he already owns, he will find himself getting perhaps many acres more than he now derives benefit from.

It is hard to make an Anglo-Saxon believe that he does not want a larger farm. Annexation is our mania. No sooner does a man "see his way out" of debt for the place he has, than he straightway longs to add a new purchase. He sees with covetous eyes the tempting excellence of adjacent territory possibly just over the fence. He imagines numberless advantages that would accrue "if he only had that strip." Mistaking broad acres for wealth, he shuts his eyes to the fact that he has really just got ready to farm profitably, and to the other fact that "shrouds have no pockets," works himself into the conviction that he needs the coveted piece, and proceeds "to [buy] again and be again undone."

Not to mention draining and other means of reclaiming land, we desire now merely to inculcate the duty of thoroughly picking up and clearing fields, particularly newly chopped, of all logs, brush, old stumps, scattering trees, rocks, and whatever obstacles may exist which impede the passage of the plow and harrow, or cover up the ground so as to stifle the growth of grass. A newly cleared piece is necessarily used for pasture for several years. We often see such, that appear scarcely half cleared. We have noticed some that, three years after they were chopped off, contained besides twenty or thirty scattering trees, as many more old logs fast becoming too decayed to burn, and numberless ancient brush-heaps, relapsing into the bosom of mother earth, and as they slowly crumbled away, providing perfect nests for Canada thistles, small burrs, and other pests, rendering worse than useless two or three square yards of ground each, and presenting an appearance as unsightly as their effect is pernicious. In a lot of five, ten or twenty acres, multitudinous small old brush-heaps will cover no little surface. A computation of the amount would surprise one who had given the matter no thought. Were they removed, how many more blades of grass would grow than the lot now affords?

The proper mode of procedure is, either in spring or fall, to go over the field in regular strips or "lands," pick, pile up and burn every stick, and after scattering the ashes, sow in the patches a few handfuls of timothy or other good grass seed. A new pasture thus treated will yield a surprising quantity of nutritious feed.

HAMPDEN.

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Excellent Potato Yeast and Bread.

Boil one dozen good sized potatoes in three pints of water, with a small handful of hops, (in a bag) When thoroughly boiled, mash the potatoes through a cullender, rinsing them through with the water in which they were boiled. Then put in one tablespoonful salt, and one of brown sugar. When cool, stir in half a pint of yeast, and stand in a warm place till it ferments.

The night before you bake, boil five or six potatoes in pure water, and rinse them through the cullender, scalding hot, upon your flour. When cool, stir in a pint of your rising, and in the morning your sponge will be in nice order. Make into loaves, and bake as usual. If you object to the taste of hops, they may be omitted, and the yeast made with potatoes only.

This recipe is given by a colored woman, who has has been forty years a cook, and is a capital baker. S. E. M.
Mansfield, Pa.

Inquiries and Answers.

Moon's Influence.—The Secretary of the "West Springfield Farmers' Club," in speaking of the discussions at a late meeting of the Club, remarks: "In connection with the subject of planting, the moon's influence upon vegetation was spoken of; several members said they had noticed that plants grew faster at the time of the full moon than at the time of the new moon—others say that the vines planted at the time of the new moon never produce fruit, although the vines grow luxuriantly. Now is this thing so, and how do you account for it? Please give us your ideas upon the subject in your next issue." [This "thing is *not* so," and consequently we cannot account for it. We have been in the daily practice of working among, cultivating, pruning, and observing trees, for thirty years or more, and during all this time, could never perceive the slightest influence of the moon. Many are led to adopt the belief, from making casual and occasional observations, remembering the coincidences, and forgetting or distorting the numerous failures. A mere "opinion" of this kind, cannot have the weight which would be due to long continued series of carefully recorded observations, pro and con—which, whenever they have been kept, have proved, as an average, about as much on one side as the other.]

Seeding and Enriching Meadows.—I sold the last year 14,160 pounds of timothy hay, which grew on a small field containing 3¼ acres, at the rate of 90 cents per hundred, which amounted to $127.44; from which deduct $2 50 for cutting, $5.50 for raking and drawing to barn, and $8 00 for drawing to market, leaves $111.44 as the nett profit on 3¼ acres, or $35 per acre; which you perceive would be the interest of $500 per acre. The yield of hay is not remarkably large. It is the fourth year's mowing without manure. The previous crops were corn, oats and wheat, with manure. Now what I wish to know is, if this field was summer fallowed and re-seeded to grass, it would be likely to produce as heavy crops of hay as formerly? The hay crop being the most profit, I would like to continue it, if it would not exhaust the soil by such a course. N. Barns, Jr. *Newburgh.* [If the ground were plowed again and *manured* at or before reseeding, it would probably increase the crop of hay, provided the manure were left near the surface, and double the usual quantity of grass seed were applied. The roots of grass do not run deeply; yet they often derive benefit from manure buried beyond their length—a deep and rich soil supplying moisture to the plants in time of drouth. But manure has still greater effect if within a few inches of the surface, where the plants may obtain the full benefit, and their increased growth will tend to prevent the bad effects of drouth. If buried by means of a gang plow or coulter harrow, a good purpose will be answered. If the soil is quite light, manure for grass should be buried deeper than on clay. A surface dressing of compost or old fine manure, not only tends to make the seed vegetate better, but produces a more luxuriant after growth. But if there is already a thick even turf, we would not break it up, but depend on autumnal top-dressings of manure or compost, to maintain and increse the fertility. If, on the other hand, there should be many vacant spots, or the turf be uneven, it would be better to re-seed, with a heavy sowing.]

Endless Chain Horse Power.—I would like to hear from some farmers who have used endless chain threshing machines. If I can't buy one that is recommended by those who have used them, I am determined to thresh the old way by tramping or flailing. J. B. *Troy, O.* [Endless chain horse powers for threshing have now been extensively used, and their value, when well made, has been fully established. Our correspondent need not fear to procure one from one of our best and reliable manufacturers. The little space they occupy enables the farmer to place them where they may be used in winter and on stormy days, not only for threshing, but for cutting stalks, sawing wood, grinding feed, &c., &c.]

Alden's Cultivator.—In your "Annual Register of Rural Affairs," I see a figure of "Alden's Cultivator," but I see no advertisement of the machine. Will you, in the next "Cultivator," give us a notice as to where it may be found—or the address of the person who manufactures it. Edward Green. *Orange Co.* [It is manufactured by J. S. & M. Peckham, Utica, N. Y.]

Hen Manure.—How should hen manure be applied to corn? If mixed, what with, and how much of the pure article should be applied to the hill? J. H. [It may be mixed with fine loam—or it may be pulverized and dropped with a planting machine with a guano attachment. A large spoonful will do for a hill of corn. Probably the easiest way, in the absence of the planting machine, would be to drop a small handful at the spot designated by the marker for each hill, mix it by means of a rake or hoe a little into the soil, and then drop the seed.]

Sheep Shedding their Wool.—Will some of your readers inform me how to prevent my sheep from shedding their wool? Some attribute it to feeding oats, but as I have not fed any, that cannot be the reason. Also what is the best feed to insure a great flow of milk? E. P. *Downingtown, Pa.* [Will some of our sheep-farmers give us the result of their experience on the subject?]

Sorghum.—As we will be a good deal interested in the manufacture of sorghum here in the west this fall, we would be glad to have a minute account of the process of sugar and syrup making, from some of your correspondents who have succeeded well. J. M.

Compost for Onions.—I intend to sow half an acre of onions, and would like to make a compost of muck, wood-ashes and salt. Will some of your correspondents inform me through your valuable paper, the quantity of each. I wish to use as much salt as I can safely, thinking it will prevent the ravages of the maggot. E. P. W.

Trans. N. Y. State Ag. Society.—When will the Transactions of the New-York State Ag. Society appear, and how are they to be obtained? J. H. W. [The Transactions are issued annually about the 1st of October—that is, the vol. for 1860 will be issued about the 1st of Oct. next. They are published by the State for gratuitous distribution to the members of the Legislature and to the State and County Ag. Societies; but as many of those who are entitled to them, sell or exchange them for other works, they may often be found at the bookstores, and we can furnish several of the vols. at $1 each.]

Muddy Cattle Yards.—Many cattle yards (containing about two acres,) like all soil in this section of Illinois are very wet and muddy. Shall I get dry ones by underdraining, having fall enough, and will they be dry enough for sheep? How deep should the tile be placed, and what distance between the drains? Using 2 inch tile for the cross ditches, will this size answer for the main one? Will some one having experience please give me the requisite information. Champaign County. [So far as the muddiness is caused by water in the subsoil, draining will relieve it—but such as results from rain from the clouds, from higher land, and off from the eaves, it will not. Carry off the drip from the eaves by troughs, and make the yard of some material that will not work up into mud, and the evil will cease. Paving is good, but stone may not be at hand. Plenty of dry straw, properly applied, will promote dryness, and with yard droppings will form good manure, if forked up into heaps in spring to decay.

The tile should be about 3 feet deep. Two inch pipe tile will do for mains, if the whole length of draining it receives is not over sixty rods in the aggregate, with a fair slope. They may be one rod apart for a barnyard.]

Portable Steam Mills.—Will you please give information through The Cultivator, in regard to the portable steam saw mills, the expense of one, and the amount of work they will perform in an hour or day. J. C. E. *Frost Village, C. E* [Will some of our readers who have tried them give the desired information]

Staggers in Horses.—I have a four-year old colt afflicted with the *blind staggers;* although I have tried several remedies which were recommended to me by my friends, &c, the horse grows no better. Having great respect for your opinion in such matters, will you be kind enough to recommend a remedy to me which has cured horses afflicted with the disease under your observation. Theo. F. *Philadelphia.* [Under the circumstances, we think our correspondent could not do better than examine the full article on this subject in Dadd's Horse Doctor. Any information from correspondents would be acceptable.]

Wells in Sand.—The difficulty Mr. Wm. Pease has with his well is one that is readily got along with. If there is water standing in the well, let down sand until the bottom is dry. Then place a wheel in the bottom, and if you can obtain well brick they are better—if not, common brick will do—lay them with cement. It will harden in a few days sufficiently to go to digging, and settle the brick as you dig. Sandy wells thus constructed, will last an age, and will not be troubled with sand running in. John J. Son.

Destroying the Vitality of Seeds.—Can you tell us how to destroy the vitality of seeds in manure without injury to the latter? If there is any way to do so easily and cheaply, you would oblige a young farmer from Maine, by stating the modus operandi. T. F. C. [Throw the manure into a heap or heaps, large and loose enough to cause active fermentation, killing the seed by the heat; and then, before the moisture is driven off, and the manure spoiled, mix with peat, muck, soil, &c., and make a good compost—the heat of the manure penetrating all parts and forming an excellent fertilizer.]

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Low-Headed Trees.

Messrs. Editors—Will you please to inform me through the columns of The Cultivator, of the best mode of pruning young orchards when the object is to form low heads. Suppose the trees, (as a great many are when you get them from the nursery,) to be from five to eight feet high, with a single main stem, and a few small side branches—my object is to have the head low enough to protect the bodies. By answering the above, I think you will not only accommodate me, but the greater portion of your subscribers in the West. Also, which is the best book on rearing young orchards, and the best work on Kitchen Gardening, and the price of each. J. M. C.

Trees several years old, from dense nurseries, where they have run up to poles, are hard to train low; taking off one-half or one-third the top is the only way. It is incomparably better to purchase such as have been worked low, in thin rows, and which are not over three years old—two years would perhaps be better. Young thrifty trees, even if tall, may be cut back without difficulty, and trained as desired. At one or two years, the heads are readily formed by *thumb-pruning,* the best of all modes.

Barry's and Thomas' Fruit Books give the desired information on raising and managing orchards—price $1.25 each. Buist on Kitchen Gardening, is a good work—price 75 cts.

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[For the Country Gentleman and Cultivator.]

GRAFTING PEACH TREES.

Your reply to your correspondent, R. K., of Nashville, Ill., though doubtless correct in reference to your climate, *may* lead him into an error. Grafting the peach succeeds admirably here, scarcely more than five per cent., under favorable circumstances, failing to "take." We make use of the splice-grafting mode, having the stock and scion of about the same size, and plant out in nursery rows at once, leaving two buds of the scion above the surface of the ground, and one below. The operation is performed during the winter or very early in spring. Make a smooth cut, see that the bark of the stock and that of the scion perfectly coincide, (on one side, at least) and tie firmly with bass matting. If the grafts cannot be planted at once, they must be heeled in, or buried in moist sand in a cellar. Whether this mode will succeed in Illinois, or not, I cannot say; but it would be well for R. K. to try it next year. We commence budding here in June.

Vineley, (near Midway) S. C. D. H. J.

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BEST TIME FOR SETTING TREES.

Eds. Cultivator—I wish to impress it deeply on the minds of your readers, to have their *nursery trees,* especially those designed for the latitude of Vermont, dug and set out in the spring of the year. I have purchased many thousand trees, and I find it will not do to take a nurseryman's word in regard to the best time of digging and setting trees. Some recommend digging in the fall and heeling in, to be set out in the spring. I say let the tree winter where it grew, and when the right times comes round, let that job be considered paramount to everything else. Go to a nursery and select your trees, and have them dug with all the roots. They will try to make you take trees with the roots all spaded off. A tree with the roots cut off is worth about as much as a man with his head cut off.

H. STEARNS.

BEDDING PLANTS.

The time is not distant when such plants as are not hardy and cannot stand our winters, but will flower freely in the open ground in summer, may be transferred from their winter quarters into the flower borders. In this latitude the 15th to 20th of May is generally the most favorable time for bedding out, although in some seasons they may be set out somewhat earlier; but on the whole it is safest to wait until the middle of the month. If possible, after they have been procured from a greenhouse, they should be placed in a cool frame for a few days so as to inure them gradually to the change of temperature, leaving off the glass every fine day, and also at night unless it is cold and stormy. Verbenas will be likely to do better if shifted from the small pots in which they are usually sold, into larger ones, and kept in a cold frame several weeks before planting out.

The best greenhouse plants for bedding purposes are Verbenas, Geraniums, Heliotropes, Petunias, Lantanas, Cupheas, Feverfew, (pretty hardy,) Gaillardias, Salvias, Nierembergias, &c.

Fuchsias are good bedders if they can be placed in a partially shaded situation, but they will not flourish if exposed to the full power of the sun's rays. Pelargoniums are beautiful when in bloom, but their bloom is of too short duration to entitle them to a high rank as bedding plants. The variegated leaved Geraniums have been introduced quite largely of late years for bedding purposes, but their foliage will not stand well our powerful sunlight. The Geraniums with sweet scented leaves, though very inconspicuous in bloom, yet deserve a place in every garden for use in bouquets. The delightful Aloysia citriodora or lemon-scented Verbena, should not be forgotten. A small bed of Lobelia is very pretty. The methods of planting are various. Most persons prefer setting the plants singly in the general flower borders. Many prefer setting them out in beds, a single sort and color to a bed; while others prefer them in beds of the same kind but of different colors. In large gardens, probably the most effective manner of planting, is a single sort and color in each bed; but this calls for a great number of plants, and unless there is a greenhouse on the premises, will be found too expensive for most persons to adopt.

Petunias may easily be grown from seed sown in a hotbed and will flower profusely by July, continuing in bloom the whole season. There is no more showy bedding plant than this, and none so profuse in bloom. This, however, applies more particularly to the single varieties, as the double varieties are usually rather shy bloomers. G. B. H.

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[For the Country Gentleman and Cultivator.]

L. L. Langstroth's Patent Bee-Hive.

EDS. CO. GENT.—I wish through your columns to make some statements to the bee-keeping public respecting my patent hive.

When I applied for this patent, I was not aware that movable comb hives had ever been used, except those with movable bars or the sectional frames of Huber. The former required the combs to be cut from their side attachments, while the latter were so costly and demanded so much experience, time and patience to open and close the sections, that notwithstanding they were invented at the close of the last century, they were confined almost exclusively to amateur bee-keepers.

In the first and all the subsequent editions of my work on the Hive and Honey Bee, I have given the plan of the Huber "leaf-hive," and while describing its defects, I never attempted to conceal my obligations to this "Prince of Apiarians." Speaking of him I say: "Very early in my apiarian studies, I constructed a hive on the plan of the celebrated Huber; and by verifying some of his most valuable discoveries, became convinced that the prejudices against him were entirely unfounded." And again—"The use of the Huber hive had satisfied me that with proper precautions the combs might be removed without enraging the bees, and that those insects are capable of being tamed to a surprising degree. Without a knowledge of these facts, I should have regarded a hive, permitting the removal of the combs, as quite too dangerous for practical use."

In the first edition of my work published in 1853, I say: "If Huber had only contrived a plan for suspending his frames, instead of folding them together like the leaves of a book, I believe that the cause of apiarian science would have been fifty years in advance of what it now is."

Now if I had known that my hive was not so much better than Huber's as to deserve a patent, and if I had been base enough to attempt to palm upon the public substantially his invention as my own, can any man of common sense believe that I would have published to the world, just where and how I *stole* my pretended invention? And yet this is substantially what I have been charged with doing.

Since my application for a patent, I have ascertained that prior to my invention other movable frames, beside those of Huber, were in use in Europe. None of them, as far as I can learn after thorough inquiry, are any better than those of Huber. I would refer those who desire information on this point, to the *Cours Pratique D'Apiculteur* of M. Hamet, published in Paris in 1859, which contains a larger variety of cuts and descriptions of hives than can be found, I believe, in any other work. All the modifications of the Huber hive are pronounced by Hamet to be useful only for purposes of observation, and he asserts that in the districts of France, where bee-keeping is most largely pursued, no movable frame hives here ever come into general use—and that the removal of the frames from the best of them is often more difficult than from the Huber hive. He closes his account of these hives with the significant remark, that "in a moment of enthusiasm he once supposed that such a hive might be cheaply made, but that he had tried it in vain."

Now compare these results in France, with the extensive use, by the best practical bee-keepers in this country, of the movable comb principle, and the inference will be almost irresistible that they have not *yet* invented a cheap and practical way of using movable frames.

In the Bee-keeper's Convention in Cleveland last March, an article was read from a recent English publication, in which all hives with movable frames are declared to have no practical value. Of all the movable frame hives now in use on the Continent of Europe, the Berlepsch hive is probably the best – (for a description of this hive, see American Bee-Journal for Jan.) Iit was invented subsequently to mine, and uses essential features covered by my patent, without which this German hive would have no more practical utility than those which have so signally failed.

Allow me to give an extract, in this connection, from a letter received by me last fall from the Baron Evon Linsingen of Oznaborick, Kingdom of Hanover, dated 10th of August, 1860—"I feel convinced that no other apiarian has been able to construct a movable comb bee-hive in such an advantageous way as you have done. On the 20th of September, the apiarians from all parts of Germany asssemble in Hanover to have a grand consultation about the hive and honey bee, and I wish you to send to my address two of your hives."

The order came too late to be filled in season for the convention. Were I to attempt to show in what particulars the various patents* in this country, using movable frames, have appropriated to a greater or less extent the essential and patented features of my invention, I should require more space than in the largest liberality you would be willing to give, besides opening a personal controversy in which comparatively few of your readers would feel any interest. This much, however, I wish to say, that in my opinion all of them use some of these features, and that without this use they would be of no more practical value than the European hives. I believe that the courts of law will sustain this opinion, and I should long before this have sought their protection but for my limited pecuniary resources, the state of my health which has caused the loss of more than half of my time for the last nine years, and the fact that other parties own the greater part of my patent.—I have never sought for more than my rights, and if any one can show that before my invention there existed any movable frame hive adapted to practical use, or any invention that used the essential and patented features of mine, I will try to be the first to acknowledge that although an *original* inventor, I was not the *first* inventor of such a hive. L. L. LANGSTROTH.

Oxford, Butler Co., O., April 10, 1861.

* Mr. Baldridge is entirely misinformed in supposing that there is no patent on the Harbison hive. It was patented in 1859.

THE CULTIVATOR.

ALBNAY N. Y., MAY, 1861.

☞ An article published in the COUNTRY GENTLEMAN of January 24th, from the pen of our contributor LEVI BARTLETT, contains some facts with reference to the farm of Hon. GEO. GEDDES at Fairmount, near the city of Syracuse. This farm includes altogether about 300 acres of land. It is, emphatically, a grain farm. We suppose there are few pieces of land of the same extent in this State, which exceed or equal it in natural capacity of production and endurance.

Some very brief notes which we had the opportunity of jotting down, in recently visiting Mr. G., will throw additional light upon the system there pursued and the results obtained, which will be of interest in connection with the statements relating thereto already from time to time given in our columns. It will be seen that natural capacity is not the only reliance upon which dependence is reposed.

We give in the first place an approximative statement as to the division of the land last year. There were

In winter wheat,........	66 acres.	In oats,....................	33 "
In spring do., ...	12 "	In Indian corn,..........	32 "
In clover—1st crop hay, and second crop clover seed,....................	26 acres.	In Herd's grass,..........	16 "
		In pasture, say,..........	65 "

The farm includes a pond of several acres, and the remainder of the land is in wood, or otherwise less productive.

As to the stock on the place, there were 284 sheep sheared, and 11 horses kept, beside seven cows, a pair of steers, and the pasturage of six more cows belonging to cottagers; for it is found preferable—indeed almost essential, to adopt the plan which has been so frequently recommended in our papers, of employing assistants with families who occupy cottages rented to them, instead of the old way of boarding single men in the farm house.

In 1859 the crop of winter wheat averaged 28 bushels per acre; in 1860 the promise was equally good, but the Hessian fly came in, rendering about one-half of it almost a failure, 33 acres only producing 10 or 12 bushels per acre—the other 33 about 25 bushels. The oats last year averaged 64 bushels per acre—the corn 67½. The number of sheep now in the yards, we should add, is about 300.

Our readers have been already informed that clover and plaster are considered by Mr. Geddes as the great stand-by in keeping up his crops. But a little consideration of the foregoing figures will prove that a very fair amount of straw must be cut each year; and that this straw trodden under foot by the stock above mentioned, will of necessity supply *some* fertilizing material of another kind.

Indeed as the manure is managed—the sheep yards, thickly littered, accumulating several feet in depth during winter, which is in spring neatly piled, *not* under shelter, because the rain is wanted on it to prevent fire-fanging—and, by autumn, thoroughly rotted and in the best order for application—it is almost astonishing what an immense amount of it is thus obtained, and at comparatively little cost for labor.

There are two barns—one eighty by twenty feet, the basement of which is divided, by racks extending from floor to ceiling and filled with fodder from above, into four compartments for the sheep, each compartment opening into a yard of its own breadth (20 feet) and 50 feet deep—the other barn adjoining, 40 feet by 75, including a central floor of 35 feet, beneath which the basement is to be occupied as a hospital for lambing ewes, and a bay on either side 20 feet in width and open down to the ground. The width of the floor is such that two loads can come in abreast if desired; and au immense quantity of grain may be thrashed here without inconvenience, the thrashing machine employed carrying out its own straw into the yard, where it is stacked at 15 or 20 feet distance from the barn. This Cattle-yard has a third grain and hay barn on the opposite side, with stables beneath for the farm horses, and is enclosed with walls for the remainder of this and the other two sides.

The basement of the two barns described is eight or nine feet high—the smaller of them 16 foot and the larger 20 foot posts above the basements. The racks mentioned, in which the fodder is dropped down to the sheep through openings in the floor above, are composed of slats too near together (2 or 2½ inch spaces) for the sheep to thrust their heads into the hay far enough for the seeds to get into their wool. Mr. Geddes finds the arrangement of the sheep-barn work so exceedingly well in practice, that he thinks it can scarcely be rivalled, and for convenience, tidiness and apparent excellence in all other respects, the writer certainly has never seen its superior.

These notes are too extended for more than a word with regard to the sheep themselves, which are of Merino descent, with a Saxon fineness of wool readily commanding 50 cents a pound; they are of good size, having long been bred with a view both to this object and to fineness of the wool, which is not laden down with grease although by no means dry—altogether a flock which no lover of the Fine-Wools could pass by without notes of most sincere and earnest admiration. Even one who must confess to a bias for the Downs and Leicesters—in these times of low mutton markets—cannot help appreciating merit of another sort; and as to mutton even, Mr. G. is going to convert us, hereafter, to the Merino faith, when one of those wethers is properly ready for the knife.

The farm, we should add, has been for some time back carried on by Mr. JAMES GEDDES, who has his father's encouragement and advice in every improvement he undertakes; and we believe that the two gentlemen have been plotting together with a view eventually of making their 300 acres support 500 sheep, yield still larger grain crops, and continue to improve in fertility several per cent. each year at the same time. Our space has allowed us barely to present a skeleton of their system of management—to which we deem it scarcely necessary to add that, neither from his own experience, nor from that of other good farmers around him, is Mr. G. led to express the most remote doubt with regard to "the profits of farming" if set about in the right spirit.

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MASSACHUSETTS BOARD OF AGRICULTURE: Eighth Annual Report of the Secretary, together with Reports of Committees appointed to visit the County Societies. For 1860.

We are indebted to our Boston correspondent, "GEORGE," for an early copy of this Report. It opens, as matter of course, with the details of the most prominent event in the Agricultural history of the past year in Massachusetts, the Cattle Disease. But several other papers are also of considerable length, and will be of value to farmers in all parts of New-England. One of these is the Report on Sheep Husbandry, submitted by the Committee of which J. S. GRENNELL, Esq., was Chairman. After reviewing the progress and decline of sheep husbandry in the State, the different breeds, and the purposes and localities to which each is best adapted, are referred to, and their management in summer and winter, and principal diseases, are also treated at some length. The Report on Root Crops, by G. M. ATWATER, Esq., follows, and will attract increased attention to this important subject. An extended paper upon Horses is submitted by the committee of which Prof. W. S. CLARK was chairman; one upon the flowage of lowlands, by that of which C. G. DAVIS was chairman—and several of the delegates' Reports upon County exhibitions—that for example, by Mr. GRENNELL, of a visit in Martha's Vineyard, are unusually full and interesting.

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GRAIN PRODUCT OF AN ILLINOIS SCHOOL DISTRICT.—A correspondent of the Prairie Farmer gives the following statistics of the grain grown last year in a single school district in Lee Co., Illinois, as gathered by the teacher. "District No. 3, four miles south east of the city of Dixon, contains 24 families, and an area of less than two by three miles. Number of bushels of wheat, 24, 692; corn 41,428; oats 12,586; barley 1,947; rye 533; buckwheat 483; clover seed 182; potatoes 2,084.

☞ On former occasions we have more than once alluded to the dependence of Great Britain—notwithstanding its own immense production—upon its Imports of Agricultural Products from other Countries. As being, financially, an element of vast importance in the business operations of the United Kingdom. As rendering all its commercial interests,—wonderful in extent as they are,—comparatively speaking, a secondary consideration, on the occurrence of a year of famine or of floods. As necessitating a degree of skill in the management of its Farms, which shall obviate, as far as lies within human power, the chances of season and the stubbornness of the earth, and in the language of ARTHUR YOUNG, "turn its climate to the best account."

And as an argument for the collection there of Agricultural Statistics, the same great fact is urged most forcibly in the North British Agriculturist of March 20, in noticing a Resolution passed at the Winter Meeting of our State Agricultural Society in favor of their collection here. Our contemporary presses the importance of the subject upon the attention of Agricultural Societies there; "hitherto the attempts made have been defeated in the House of Commons by the agricultural members, and no bill which provides for the collection of statistics either by compulsion or by the free will of the occupants of the soil can be carried through Parliament except agriculturists show that they desire statistics," while "agricultural associations could effect much to weaken, if not to ultimately eradicate prejudices against statistics, were the subject occasionally discussed at their meetings."

"The imports of agricultural products," it says, "have now assumed such an extraordinary amount that it becomes an imperative duty of the Government to adopt means to collect information regarding the produce of our own soils—not alone for ascertaining what is produced, but for aiding the further development of the productive capabilities of those soils." Let us look for a moment at the statement subjoined by the N. B. Agriculturist, showing wherein these import consist, and what an amount of money they represent; for the demand in Great Britain for the products of American Agriculture, is a matter of almost vital importance to the prosperity of our Farmers, and one which they cannot study too minutely. We condense the table into as concise form as possible, abridging its details in order to show merely the main sources from which Great Britain has derived her supplies during two years past, and their declared value according to Board of Trade returns.

IMPORTS OF WHEAT INTO GREAT BRITAIN—	1859.	1860.
From Russia,	£1,872,049	£3,551,907
Prussia,	1,879,784	3,410,161
France,	2,420,224	1,618,762
United States,	80,908	4,323,806
Denmark, Mecklenburg, Hanse Towns, Turkey, Wallachia and Moldavia, and Egypt,	1,892,944	2,519,830
Other Countries,	567,623	1,139,615
Wheat,	£8,713,582	£16,554,083
Wheat Meal and Flour—from France,	1,954,248	1,594,030
United States,	151,344	1,826,582
Other Countries,	287,371	899,946
Total value of Wheat and Flour,	£11,106,545	£20,874,641

It has been said that the Wheat Plant is the emblem of Civilization—a saying which seems confirmed by the most solid of all arguments, when we find a single nation paying out in the single year 1860, over *One Hundred Millions of Dollars* for this single grain—an amount almost double the imports of 1859, owing to the very wet and tempestuous season.

The value of the other agricultural products imported in 1860, was:—

GRAINS.		LIVE ANIMALS AND MEATS.	
Barley,	£3,356,903	Oxen, Bulls and Cows,	£1,155,150
Oats,	2,624,158	Calves,	82,677
Peas,	617,846	Sheep and Lambs,	640,438
Beans,	793,451	Swine,	122,260
Indian Corn,	3,165,804	Salt Beef,	847,875
Rice, not in husk,	1,023,108	Bacon,	870,286

Butter,	in 1859,	£2,080,143— in 1860,	£4,078,017
Cheese,	do.	1,039,180— do.	1,597,569
Tallow,	do.	2,933,066— do.	4,014,280

By multiplying these amounts in pounds sterling by five, the number of dollars represented will be ascertained, nearly. And including, with the above, *Flax* to the value of £3,836,770 (mostly obtained from Russia and Prussia) and *Wool* to the value of £11,031,379 (of which about one-half comes from Australia)—we have as the aggregate amount of the Agricultural Imports thus enumerated for the year 1860, the very pretty gross sum of about *eight hundred and fifty millions of dollars*, or something like $28 for each man, woman and child from Queen Victoria down. To all this is to be added some millions more for *Cotton*, which is not included in the figures of our contemporary; the exact value imported into Great Britain in 1860, we have not the means at hand of determining.

☞ It is never unpleasant to obtain confirmation of one's own views. We have frequently expressed our opinion of the great importance of proper Ventilation to the health and thriving condition of the domestic animals of the Farm, and we have been glad to see in many of the best barns and stables of recent erection, the disposition manifested to pay so strict attention to the requirements of our horses, cattle and sheep, in the respect referred to.

Our attention is now attracted to the subject by a passage in the recent work of an eminent foreign writer, from which we deem it fair to conclude that among practical men in England it is thought that Swine require cleanliness and ventilation as well as other animals, not only in order that they may accumulate flesh to good advantage, but also that the character of the resultant pork or bacon, may stand the test of the epicure in such matters. Whether the writer alluded to, Mr. C. DICKENS, will be received as an agricultural authority on general subjects we do not know; but, in the present instance, those of our western friends would probably agree with him, who think there is nothing like roving in a good clover field under the free air of heaven, to fatten pigs just right. It is the large-hearted, awkward, and not very bright, but very patient and practical blacksmith, in a recent chapter of "Great Expectations," who is speaking:—

> "Your servant, Sir," said Joe, "which I hope as you and Pip,"—here his eye fell on the Avenger, who was putting some eggs on the table, and so plainly denoted an intention to make that young gentleman one of the family, that I frowned it down and confused him—"I meantersay, you two gentlemen—which I hope as you get your elths in this close spot? For the present may be a werry good inn, according to London opinions," said Joe, persuasively, "and I believe its character do stand i; but I would'nt keep a pig in it myself—not in the case that I wished him to fatten wholesome and to eat short with a meller flavor on him."

☞ The Board of Agriculture of the Province of New Brunswick have decided to hold the triennial Provincial Exhibition at Sussex, Oct. 1—4, 1861. The Province grants $3,000 toward the Exhibition, which amount will be offered in Premiums for Stock, Produce, &c.

It is moreover stated that the sum of $4,000 has been raised in the Province, and placed at the disposition of the Board, to purchase or procure articles necessary to represent New Brunswick advantageously at the great Industrial Exhibition at London in 1862. The St. John *News* thinks that "New Brunswickers only want a fair stage and no favor," at the coming "World's Fair;" they are at least, we think, the first on this side the Atlantic, to take the proper steps toward due preparation for it. The example should not be lost to the Manufacturers and Farmers of New-York, and other States.

SHEEP KILLED BY DOGS.—A correspondent of the Prairie Farmer gives the following remedy: A wool grower had suffered from dogs. He procured a worthless slut, tied her up at a certain season, dug several graves, laid around some meat with strychnine in it. In the morning the dogs were lying around dead, and he quietly buried them. The "season" comes around two or three times each year.

In some States, the annual loss to flocks is over a hundred thousand dollars; the loss by the death of dogs as above, if it were generally practiced, would probably be not so great.

☞ We learn that J. S. GRENNELL, Esq., of Greenfield, Mass., has just received from England a number of choice Rouen Ducks.

☞ We are indebted to Mr. Mechi for a copy in pamphlet form, of the paper read by him before the London Central Farmers' Club, Feb 4, 1861, and referred to very briefly in the last number of the Country Gentleman. Its subject as there stated, is the Past, Present and Future of English Agriculture. Some curious statistics are given of very early times—such as the prices established by law in the year 866, when a goat was put down at twopence, a sheep at a shilling, a cow at five shillings, a mare or a *man* (a slave) at twenty shillings, and a horse at thirty shillings! We are told that in the 15th century eight or nine bushels of wheat per acre was considered "a good crop" in Suffolk, or hardly four to one on the seed sown; and "roast beef at Christmas appears to have been a luxury of modern times, for, formerly, as soon as the depasturing season ended, the fat animals were killed and salted, to prevent their becoming lean again—the hay being required for cows and young growing animals."

We could wish that Mr. Mechi had been fuller in tracing the progress of Agriculture during the past half-century. He contents himself with pointing to the several leading features in it, and this very briefly. And as to the "Future" of English Agriculture, he says it must be based on a general use of Steam Power—in cultivation, on the road, everywhere where power is employed—and on the "formation of Public Companies for the Improvement of Agriculture."

There is one point worthy of passing notice—the high credit awarded to Farmers' Clubs and Agricultural Societies for the beneficial influence exerted by them in promoting Agricultural progress, and above and beyond this to the Agricultural Press, as being the medium through which most of the good effected by the Societies, has in reality been accomplished.

☞ The *Journal d'Agriculture Pratique* for the 20th ult. brings us the Ministerial Decrees relative to the Great Regional Agricultural Exhibitions, to be held throughout France during the month of May. As was described in the Foreign Correspondence of the Co. Gent., each of these "Regions," which are twelve in number, embraces several Departments, and the whole direction, management and expense of the Agricultural Exhibition held in each Region, are borne by the government directly. At each of the exhibitions prizes are offered for cattle, sheep and pigs. In addition to prizes for breeding animals of the native breeds, prizes are offered for animals of English breeds, and crosses of the Short-Horn upon the native cattle of the country. As matter of curiosity we subjoin a statement of the amount and number of cash prizes and medals to be awarded, showing a total of nearly $128,000 devoted by government to paying premiums, aside from the medals, and other expenses attendant upon the shows:

	Sums in Prizes.	Number of Prizes & Med.
For Cattle,	404,185 francs.	1,274
Sheep,	85,735 do.	403
Pigs,	36,390 do.	250
Poultry,	5,300 do.	187
Implements,	. ..	2,422
Produce,	....	204
Prizes of honor and service,	108,000 do.	180
Total,	639,610 francs.	4,920

It will be noticed that Horses are not included in this list. Special exhibitions are to be organized in connection with new arrangements respecting the Government Studs, of which the particulars are promised later in the season. With regard to the Premiums on Farms, or rather on farm management, which are given above under the head of "prizes of honor," it is stated that 148 Farms are now entered for the Prizes to be awarded in 1862, to which visits are to be made as soon as the Shows of the present year are over. Those receiving prizes in 1861 were thus entered a year ago, and examined by those awarding the prizes during the past season.

☞ At the last meeting of the Council of the Royal Ag. Society of England, a collection of agricultural implements, manufactured in Montreal, "many of which appear to be of excellent construction and remarkably cheap," was presented by His Grace the Duke of Newcastle, by whom they had been brought home from Canada.

☞ The ensuing annual meeting of the Royal Agricultural Society of England is to be held at Leeds in the week commencing on Monday, July 15th. The show ground will be about 20 acres in extent. The amount offered for prizes is as follows:—By the Society, for horses, cattle, sheep and pigs, £960; for implements, £510; by the local Leeds Committee, £800; total, £2270—which is a larger sum than ever offered at any previous meeting of the society. The trial of implements, except steam cultivators, will take place at or near the show-ground; but the steam cultivators or steam plows will be tested on about 2000 acres of land at Gaifourth, about seven miles from Leeds.

☞ Our friend and occasional correspondent, Dr. M. W. Philips of Mississippi, is widely known for the efforts he has put forth in the advancement of the agriculture of that State. His contributions to the "Southern Rural Gentleman" should elicit the attention and provoke the imitation of the Planters and Farmers into whose hands it comes; and a correspondent of that journal, who has just visited him, shows that the Dr. practices what he preaches, while his herd of Devons and his improved swine of various breeds—Essex, Neapolitan and Berkshire—appear to be completely acclimated in their southern home—"all thriving, healthy and doing well." They receive many compliments upon their excellence and judicious selection.

☞ Col. B. P. Johnson, Secretary of the N. Y. State Agricultural Society, last week received through the Russian Consulate at New-York, a Diploma from the "Scientific Committee of the Imperial Ministry of Domains," as a Corresponding Member of that body,—under date of St. Petersburgh, Oct. 7, 1860, and bearing the signature and seal of the Minister of the Imperial Domain.

☞ Our last English Agricultural exchanges contain the announcement that Mr. Jonas Webb has resolved to discontinue the breeding of Southdowns—a breed of sheep which owes much of its present fame to this distinguished agriculturist. "A public sale at Babraham during the second week of July is to disperse the whole of this valuable flock, and doubtless over both hemispheres.'

☞ We have received several inquiries with regard to the new provision in the Postage Law, by which Seeds, Cuttings, &c., are entitled to transmission by Mail at one cent per ounce. Mr. Thorburn, Seedsman, of this city has obtained from the authorities at Washington the amendments to the law, passed at the last session of Congress, and the section referred to reads as follows:

"*Section* 17. *And be it further enacted*, That cards, blank or printed blanks, in packages weighing at least eight ounces, *and seeds and cuttings in packages not exceeding eight ounces in weight, shall also be deemed mailable matter, and charged with postage at the rate of one cent an ounce, or fraction of an ounce*, to any place in the United States under fifteen hundred miles, and at the rate of two cents an ounce or fraction of an ounce, over fifteen hundred miles, *to be prepaid by postage stamps*."

This settles the whole matter, and Postmasters will act accordingly. But packages containing seeds and cuttings *should in all cases be distinctly marked as such on the outside.*

Cheap Corn Sheller.—The Corn Sheller noticed on p. 157, is an old Yankee notion. A large strong cask is made, with a head about a foot from the bottom, which is better than placing a half bushel measure under a cask. They are very useful to shell garden beans and peas, when one has but a small quantity. But the cheapest corn sheller, if one has a large quantity of corn to shell, is the old fashioned flail, a good floor, and the brawney arm of the farmer. In this vicinity but little corn is shelled, except for family use. It is the practice of most to grind the corn in the ear, and I have never yet heard of any ill effects from feeding the provender. On the contrary, it is considered by many better for stock. C. W. G. *Mass.*

[For the Country Gentleman and Cultivator.]

TARES---RAPE---SOILING.

EDS. CO. GENT.—I see some inquiries about fall tares in a late number of the Co. GENT. I think the fall tares not so sure as spring tares. I have grown the spring tares to advantage, and find them very good for soiling purposes. My mode of culture is as follows: I select a piece of ground near the farmstead—prepare it in fall by giving it a good dunging, which I plow in, for the winter's frost tempers and makes it more friable. About the first week in April put on the cultivator. Bring it to a fine tilth, and then sow 2 bushels of seed per acre. By sowing thick and having the ground in good heart, they grow much quicker. I finish off by rolling. It leaves the surface more even, and makes the mowing more easily accomplished. I have never attempted to raise a root crop off the same piece of ground, but it can be done, for the first crop of tares will be taken off by the middle of July, which leaves ample time for a crop of yellow or white turnips. Some people say they mow the tares twice over, but the way I have done is to mow once, and pasture with sheep the second crop. After soiling with tares I commence with rape, which is sown in the middle of May. Grow 2 acres of tares, and from 5 to 10 of rape, which is all eaten off before winter. Part of the rape is consumed by sheep on the ground, which leaves the land in fine condition for spring wheat.

If A. S. of Morpeth, wishes to keep a succession of soiling crops, to come in all through the summer, I would advise him to grow rape, for it is the best crop I have tried for sheep, cows, or young stock of any kind. I always wean the young lambs on rape, and find it makes them grow the best of anything I have seen. If he wishes more information about growing rape, I will very freely give it to him. J. K. *Guelph, Canada West.*

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[For the Cultivator and Country Gentleman.]

TYING GRAPES.

The best and cheapest material to tie grapevines to stakes or trellises, is basket willow; any small tough willow twig will do. Every vineyard should have its willow patch; it is then always handy, can be used at any time, makes a strong ligature, which, when dry, can only be loosened by cutting with a knife. It costs little or nothing, merely the setting out of the willow; is better than twine, bass matting, or any other substance, and the labor is performed in less time, for when a vine is once seized with the willow it cannot slip out of one's reach, as is the case with other materials used for tying, which often causes much annoyance. Some persons are prejudiced against willow ties, saying that no one but a German can use them. As this is contrary to the commonly received opinion, that "a Yankee can do anything if he tries," I recommend to grape-growers who have not tried it to do so. My opinion is that in future they will use nothing else.

Mortonville, N. Y. W. A. WOODWARD.

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[For the Country Gentleman and Cultivator.]

FRUITS AND GRAPES IN TEXAS.

EDS. CO. GENT.—Owing to the extremes of heat and cold in a large portion of Texas, and also the great drouth to which it is subject, the State is not well adapted to the culture of fruit. Apples, pears, plums and cherries, do not thrive, nor do the Isabella and Catawba grapes. The native grapes—of which the "Mustang" is one of the best for wine making—could be cultivated with profit. The Mustang is a very abundant bearer, and there are instances in which one vine has produced more than sufficient grapes for a barrel of wine. The Post Oak is another native grape of excellent quality, being large, purple, with a thin skin, and a fine slightly acid flavor. However its low habit prevents much of its fruit from getting ripe, and there are few persons who have been permitted by the hogs and turkeys, to eat mature Post Oak grapes. I fortunately obtained some last summer, and they are surely worthy of extensive cultivation in this climate. It rarely grows more than five or six feet high. Another indigenous species peculiar to the hills northwest of Austin, is also of low habit. It is white, and said to be of fine flavor. It is of medium size, and its pleasant taste has already induced some to transfer it to their gardens. At first I thought it must be the Vitis rupestris of Scheele, but according to the Mexican Boundary Report, that species is black when ripe. It is very doubtful whether any of the Texas grapes will thrive in other sections which have a very different climate. S. B. BUCKLEY.

Austin, Texas, March 31.

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☞ The Annual Report of the Trustees of the N. Y. STATE AGRICULTURAL COLLEGE, transmitted to the Legislature by Gov. MORGAN, Jan. 17, has been printed. A class numbering 27, has been engaged in study at the Institution at Ovid, since the winter term began, Dec. 5, and from the large number of inquiries constantly received, increased attendance is anticipated with the opening of the summer session. Among donations to the College since the last Annual Report, the following liberal gifts attest the public spirit and generosity of their respective donors:—

Major M. R. Patrick,	$250	James O. Sheldon,	$250
B. N. Huntington,	257	Jona. Thorne,	500
James Boorman,	250	E. G. Faile,	250
Gov. E. D. Morgan,	250	Lewis G. Morris,	250
Loring Andrews,	100	Thomas Frazer,	100
Wilson G. Hunt,	100	Thomas Small,	100
Chas. H. Russell,	100	B. M. Whitlock,	250
T. Hall Faile,	250	James Brown,	250
C. Buckhalter,	100	James McLean,	100
John A. King, Jr.,	$50		

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A Few Things, with the Reasons Why.

Buy good tools, for they are the cheapest; keep them dry and clean, for they will last one-third longer.

Keep your buildings up from the ground, for you will thus save many dollars in repairs. Have a good water-lime stone wall under all your out-buildings, for this makes them many degrees warmer. Leave holes in the wall for ventilation, that can be closed in winter, for thus you will preserve the sills and sleepers from decay.

Have good stock, for this is the only kind that "*pays.*" Feed them well; for then they will feed you. Bed them well with straw; for the extra manure you thus gain, will grow twice as much straw for next winter's use.

Take an agricultural paper, for it is *very* useful. *Read* it too, for then it is more *useful.* *Practice* what you *think* is right, after reading, for then it proves *most* useful.

Palermo, N. Y., 1861. G. B. J.

COE'S SUPERPHOSPHATE OF LIME.—The subscriber has the above article genuine, and is prepared to furnish it in bags of 125 pounds, or by the ton from one to ten. Terms made known on application.
☞ Circulars sent gratis. WM. THORBURN, Seedsman.
April 25—w&mtf. 490 & 492 Broadway, Albany.

WM. R. PRINCE & CO., FLUSHING N. Y., Will sell trees at the following reduced prices, by the hundred. Apples $14—Dwarf Pears $25—Standard Pears $30 to $40—Standard, and Dwarf Cherries $15—Peaches $8 to $10—Plums $25 to $30—Quinces $14. Grapes at very low prices. April 25—w&m1t.

FERTILIZERS.
FOWLE & CO.'S SOLUBLE PHOSPHATED
PERUVIAN GUANO.
Superior to Peruvian Guano alone and twenty per cent. cheaper.
FOWLE & CO.'S SUPERPHOSPHATE OF LIME.
These Fertilizers have been generally tested by the most intelligent farmers of Virginia and Maryland, with the most satisfactory results. Pamphlets containing analysis of Prof. Campbell Morfitt, of New-York, with testimonials, and other valuable information, will be supplied by mail, and orders will be promptly executed upon application to the agent, EDWARD FRANKS, 42 Exchange Place, New-York.
April 18—wtfm2t. FOWLE & CO., Proprietors, Alexandria, Va.

BEES AND BEE KEEPING—A Plain, Practical Work, with directions how to make Bee-Keeping a Desirable and Lucrative Business, and for Shipping Bees to California. By W. C. HARBISON. Price $1, by mail post paid. For sale by L. TUCKER & SON, Co. Gent. Office, Albany, N. Y.

THOROUGH-BRED AYRSHIRES.—

Three BULLS—one 4 years old—one 2 years old—one yearling. One COW, 6 years old, with bull calf by her side.

These are all fine specimens of the breed, with perfect pedigrees, and will be sold low. Address ALFRED M. TREDWELL,
April 11—w4tm1t. 45 Fulton-street, New-York City.

SEEDS BY MAIL.—

POSTAGE

ONE CENT PER OUNCE!

SEND YOUR ORDERS!!

☞CATALOGUES ON APPLICATION.☜

WM. THORBURN, Albany Seed Store,
April 11—w2tm1t. 490 & 492 Broadway, Albany, N. Y.

LANDSCAPE GARDENING AND RURAL

ARCHITECTURE—Landscape, Agricultural and Civil Engineering, Surveying, Leveling and Draughting.

GEO. E. WOODWARD,

Architect, Civil Engineer & Draughtsman,

No. 29 BROADWAY, NEW-YORK.

Country Seats, Parks, Rural Cemeteries, and public and private roads, laid out and superintended. Plans, Elevations and Working Drawings for Buildings in all departments of Rural Architecture, prepared and mailed to any section of the country. Consultations gratuitous, personally or by letter, March 21—w&mtf.

ITALIAN BEES AND QUEENS FOR SALE.

For particulars send early for Circular. M. M. BALDRIDGE.
March 14—weow5tm2t. Middleport, Niag. Co., N. Y.

EXTRACT OF TOBACCO.—

For dipping Sheep and Lambs, and for destroying all kinds of Vermin on other animals.

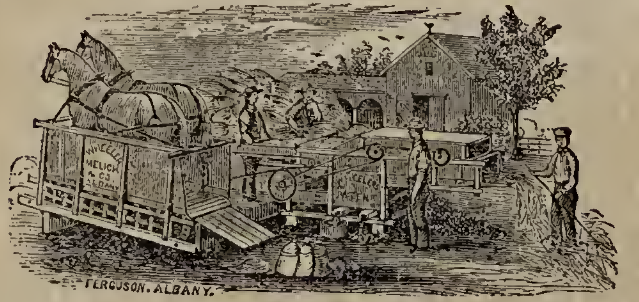
The manufacturers of this new and valuable preparation. beg leave to call the attention of Farmers and Graziers to this effectual remedy for destroying Ticks, Lice, and all other insects injurious to animals and vegetation, and preventing the alarming attacks of the Fly and Scab on Sheep.

Its use not only removes the vermin on animals but cleanses and purifies the skin, thereby materially benefitting their general health, and greatly improving wool, both in quality and quantity.

This article completely supersedes that LABORIOUS and DISAGREEABLE work of preparation in your own buildings for sheep-washing, as it is ready at all times, in any climate, and for all descriptions of Sheep, even for Ewes in lamb, and can be furnished at a reduced cost.

FISHER & CO., Sole Agents.
March 14—w&m3mos. 23 Central Wharf, Boston.

NEW-YORK STATE AGRICULTURAL WORKS.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Manufacture Wheeler's Patent Railway Chain

HORSE POWERS,

for one or two horses.

PLANTATION HORSE POWERS,

(four horse or six mule levers.)

Wheeler's (improved) Patent Combined

THRESHER AND WINNOWER,

(No. 1, 30 inch, and No. 2, 26 inch Cylinders.)

OVERSHOT THRESHER AND SEPARATOR,

and other FARMING MACHINES for Horse Power use.

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IMPROVED THRESHER AND WINNOWER,

of which over 400 were sold in 1860, satisfying all purchasers of their superiority and economy for threshing, separating and winnowing at one operation.

CIRCULARS containing list of PRICES and full DESCRIPTIONS and CUTS of each MACHINE, with statements of their capacity for work, will, on application, be sent by mail, postage free.

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WHEELER, MELICK & CO., Albany, N. Y.
April 4—weow6tm3t.

SHORT-HORN BULLS FOR SALE.

The subscriber offers for sale four Short-Horn Bulls, all of fine size and symmetry; three of them are out of imported cows by imported or the get of imported bulls of Bates stock, and the other by an imported Bull, out of a cow of the Princess stock:

DUKE OF RUTLAND—white, calved June 6, 1859; got by Duke of Cornwall, 2757, out of imported cow Famous, by Mr. Bates' Earl Derby, (10177,) &c., &c.

DUKE OF CHESTER—roan; calved Aug. 28, 1859; got by imported Duke of Portland, 1482, out of imported Lady Liverpool by Mr. Bates' 3d Duke of York, (10,166,) &c., &c.

BEDFORD—white; calved Sept. 9, 1859; got by imported Duke of Portland, 1482, out of Duchess of Exeter, by imported Duke of Exeter (10152,) &c., &c.

DUKE OF RICHMOND—red; calved Oct. 6, 1860, got by imported Duke of Portland, 1482, out of imported Alice Maud, by Grand Duke, (10284,) &c., &c. Address Dr. HERMAN WENDELL,
March 14—w&mtf. Hazelwood, Albany, N. Y.

BLACK HAWK STALLIONS FOR SALE.

HERO.—Nine years old, 15 hands high, coal black and very fast. Got by "Hill's" "Old Vermont Black Hawk." Dam by "Sherman Morgan." Grand-dam by "Membrino." Price, $1200.

KENTUCKY HAWK.—Six years old, 15 hands high, dark chestnut and very handsome, has trotted in 2:48. Got by "Hero," dam half sister to the celebrated pacing mare "Pocahontas," got by "Cadmus," and out of a thorough-bred mare. Price, $1,000.

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March 21—w4m2t.

THOS. WOOD continues to ship to any part of

the Union, his celebrated PREMIUM CHESTER CO. WHITE HOGS, in pairs not akin, at reasonable terms. Address.
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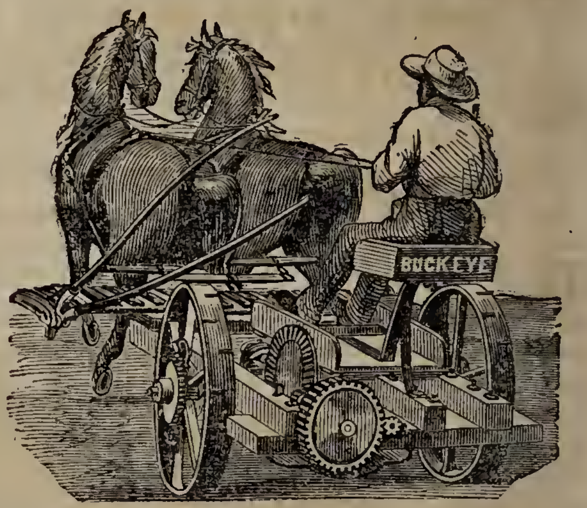
AWARDED BY

N. Y. STATE AGRICULTURAL SOCIETY,

At Elmira, October, 1860.



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WITH FLEXIBLE FOLDING-BAR.

The unprecedented success of this machine is a convincing proof of its excellence. It has never failed, wherever introduced, to take precedence over all other Mowers, and the important principles COVERED BY ITS PATENTS are now universally conceded to be indispensable to a

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This concession is in the strongest manner attested by the fact that so many mowing machine manufacturers, abandoning their own patterns, are now modelling after the BUCKEYE in all points where they think it possible to evade its patents, and the popularity of their machines is found to be in exact proportion to the extent of their imitations and infringments. The farmer who contemplates purchasing a mower for the harvest of 1861 will, in selecting the Buckeye, secure the only machine which

COMBINES ALL THE REQUISITES

of a perfect Mower, including strength, durability, simplicity, lightness of draft, freedom from side-draft, portability, convenience, perfect adaptation to uneven surface. ease in backing, safety and comfort to the driver, ease to the team, and capability of doing

GOOD WORK ON ANY DESCRIPTION OF LAND,

and in any variety or condition of grass.

Farmers wishing to avoid disappointment will give their orders early in the season.

Circulars, with full description and testimonials, forwarded by mail.

JOHN P ADRIANCE Manufacturer and Proprietor,
Po'keepsie, N. Y.
Sole Warehouse in New-York, 165 Greenwich-st., near Courtlandt-st.
April 11—w8tm2t.

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The following varieties will be mailed to any address in the Union on receipt of the price affixed, which may be remitted in postage stamps or current bills:

50	Seeds Hubbard Squash,	15 cents.
20	do. Honolulu do.	15 do.
50	do. Boston Marrow, pure,	15 do.
50	do. Japan Apple Pie Melon,	15 do.
100	do. Perfection Tomato (Pomo d'oro Lesteriano.)	15 do.
1	Packet Early Paris Cauliflowers (the best in cultivation,)	25 do.
1	do. Marblehead Mammoth Cabbage (Gregory's,)	25 do.
½	ounce Stone Mason Cabbage (Gregory's)	15 do.
½	do. Premium Flat Dutch Cabbage,	15 do.
1	Packet Lee's New Sprouting Broccoli, (a new English variety,)	50 do.
1	ounce Yellow Danvers Onion, (the best variety,)	25 do.

The entire collection will be sent by mail, prepaid, for $2. Cash must always accompany the order.

The above may be relied upon as the very best of their kind in cultivation. Address B. K. BLISS.

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We are now manufacturing a superior **Steel Plow**, intended for general use. Some of the advantages it possesses over the cast iron plow, are lightness of draught, durability, and freedom from clogging or sticking in heavy, clayey sticky or tenacious soils. The parts most exposed to wear are so constructed that they may be readily repaired by any blacksmith.

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"Mohawk Valley Clipper," No. 1, full trimmed, all steel,	$15.00
do. do. with cast point,	14.00
"Empire," No. 1, with cast point, full trimmed,	15.00
For Three-Horse Plows,	$1.50 extra.
For Adjustable Beams,	1.00 do.

We also manufacture Sayre & Klink's Patent Tubular Shank

STEEL CULTIVATOR TEETH.

These Teeth are intended to supersede the old style of wedge teeth and teeth with cast iron heads. They are not liable to become LOOSE in the frame, like the FORMER, nor to BREAK, like the LATTER. They are as readily attached to the frame as any form of tooth.

SAYRES' PATENT HORSE HOE.

This implement is considered to be superior to any other for cultivating Corn, Cotton, Tobacco, Potatoes, Hops, Broom Corn, Nurseries, and all crops planted in rows or drills.

Steel Shovel Blades and Cultivator Points made, and all kinds of Swaging and Plow work done to order.

☞ SEND FOR A CIRCULAR. ☜

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Ilion, Herkimer Co., N. Y.

E. Remington & Sons,
Benjamin P. Markham,
Geo. Tuckerman.

March 21—w&mtf.

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I offer for sale two Duke of Oxford BULL CALVES, one of them got by the "Duke of Gloster," (11382,) the other by imported "Grand Duke of Oxford," (16184.)

Also several well bred Bull and Heifer Calves by the same sire.

I have also a few

JERSEY OR ALDERNEY

Cows and Heifers for sale. JAMES O. SHELDON,
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OSIER WILLOW CUTTINGS.—

The best variety for market and for live fence (Salix purpurca)—price $3 per 1000. By mail, postpaid, for experiment, $1 per 100.

Jan. 17—w16tm4t. D. L. HALSEY, Victory, Cayuga Co., N. Y.

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ICHABOE GUANO.
AMERICAN GUANO.
FISH GUANO.
IMPROVED SUPERPHOSPHATE OF LIME.
BONE DUST, FINE AND COARSE.
LAND PLASTER.

For sale in quantities to suit purchasers. A. LONGETT.
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Superphosphate of Lime,

Pure Ground Bone, Land Plaster,

Lodi Manufact'g Company's Poudrette, &c.

Sold at the North River Agricultural Warehouse,

GRIFFING BROTHER & CO., Proprietors,
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AGRICULTURAL IMPLEMENTS.—

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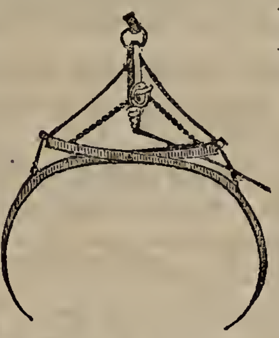

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HAY ELEVATOR

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Can be used by one or two horses.

Price, including three pulleys and 60 feet of rope, $12.

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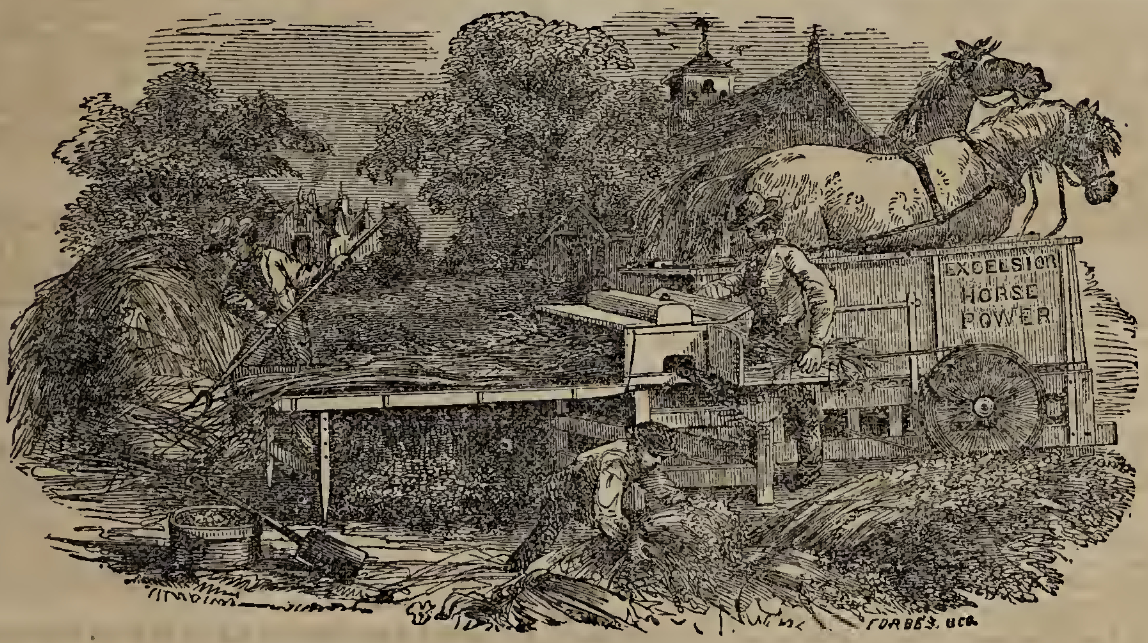

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Endless Chain Horse Powers, Threshers and Cleaners, Threshers and Separators, Saw Mills and Saws Dog Powers and Clover Hullers, Shares' Patent Coulter Harrows and Hilling, Hoeing & Potato Covering Machines, &c.

Having been engaged in the manufacture of the above machines for several years and by personal superintendence to their getting up, I am enabled to guarantee each to be perfect of its kind, and will WARRANT them to give satisfaction.

Letters of inquiry will be promptly replied to, and liberal inducements will be offered to the trade. CHAS. E. PEASE,
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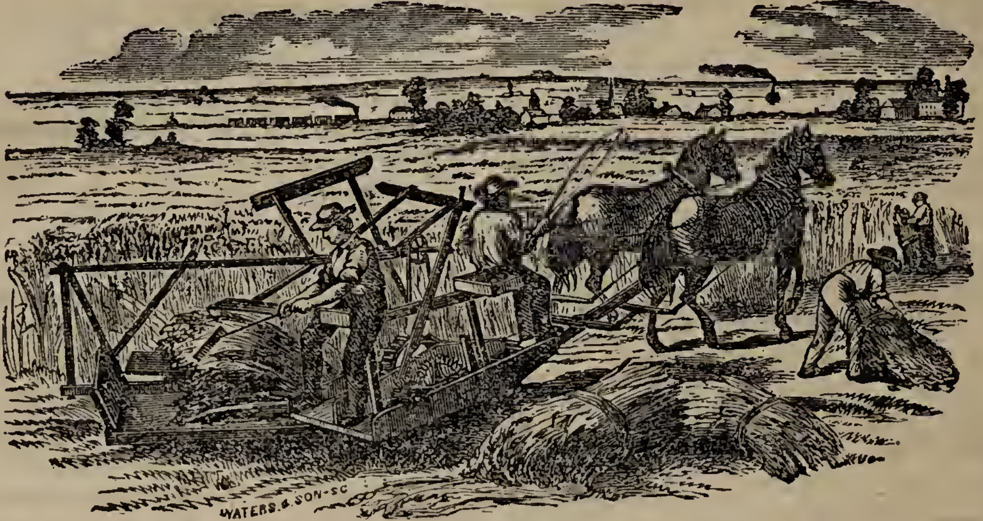
HOMES FOR THE INDUSTRIOUS

IN THE GARDEN STATE OF THE WEST.



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1,200,000 ACRES OF RICH FARMING LANDS,

In Tracts of Forty Acres and upward on Long Credit and at Low Prices.

THE attention of the enterprising and industrious portion of the community is directed to the following statements and liberal inducements offered them by the

ILLINOIS CENTRAL RAILROAD COMPANY.

which, as they will perceive, will enable them, by proper energy, perseverance and industry, to provide comfortable homes for themselves and families, with, comparatively speaking, very little capital.

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No State in the Valley of the Mississippi offers so great an inducement to the settler as the State of Illinois, There is no portion of the world where all the conditions of climate and soil so admirably combine to produce those two great staples, Corn and Wheat, as the Prairies of Illinois.

EASTERN AND SOUTHERN MARKETS.

These lands are contiguous to a railroad 700 miles in length, which connects with other roads and navigable lakes and rivers, thus affording an unbroken communication with the Eastern and Southern markets.

RAILROAD SYSTEM OF ILLINOIS.

Over $100,000,000 of private capital have been expended on the railroad system of Illinois. Inasmuch as part of the income from several of these works, with a valuable public fund in lands, go to diminish the State expenses ; the taxes are light, and must consequently every day decrease.

THE STATE DEBT.

The State debt is only $10,106,398 14, *and within the last three years has been reduced* $2,959,746 80, *and we may reasonably expect that in ten years it will become extinct.*

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The State is rapidly filling up with population ; 868,025 persons having been added since 1850, making the present population 1,723,663, a ratio of 102 per cent. in ten years.

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The Agricultural Products of Illinois are greater than those of any other State. The products sent out during the past year exceeded 1,500,000 tons. The wheat crop of 1860 approaches 35,000,000 bushels, while the corn crop yields not less than 140,000,000 bushels.

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Nowhere can the industrious farmer secure such immediate results for his labor as upon these prairie soils, they being composed of a deep rich loam, the fertility of which is unsurpassed by any on the globe.

TO ACTUAL CULTIVATORS.

Since 1854 *the Company have sold* 1,300,000 *acres. They sell only to actual cultivators, and every contract contains an agreement to cultivate. The road has been constructed through these lands at an expense of* $30,000,000. *In* 1850 *the population of forty-nine counties, through which it passes, was only* 335,598 *since which* 479,293 *have been added ; making the whole population* 814,891, *a gain of* 143 *per cent.*

EVIDENCES OF PROSPERITY.

As an evidence of the thrift of the people, it may be stated that 600,000 tons of freight, including 8,600,000 bushels of grain, and 250,000 barrels of flour were forwarded over the line last year.

PRICES AND TERMS OF PAYMENT.

The prices of these lands vary from $6 to $25 per acre, according to location, quality, &c. First class farming lands sell for about $10 to $12 per acre ; and the relative expense of subduing prairie land as compared with wood land is in the ratio of 1 to 10 in favor of the former. The terms of sale for the bulk of these lands will be

ONE YEAR'S INTEREST IN ADVANCE,

at six per cent per anuum, and six interest notes at six per cent., payable respectively in one, two, three, four, five and six years from date of sale ; and four notes for principal, payable in four, five, six and seven years from date of sale; the contract stipulating that one-tenth of the tract purchased shall be fenced and cultivated, each and every year, for five years from date of sale, so that at the end of five years one-half shall be fenced and under cultivation.

TWENTY PER CENT. WILL BE DEDUCTED

from the valuation for cash, except the same should be at six dollars per acre, when the cash price will be five dollars

Pamphlets descriptive of the lands, soil, climate, productions, prices, and terms of payment, can be had on application to

J. W. FOSTER, Land Commissioner,
CHICAGO, ILLINOIS.

For the name of the Towns, Villages and Cities situated upon the Illinois Central Railroad, see pages 188, 189 and 190 Appleton's Railway Guide.

THE CULTIVATOR.

THIRD] TO IMPROVE THE SOIL AND THE MIND. [SERIES.

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J. J. THOMAS, ASSOCIATE EDITOR, UNION SPRINGS, N. Y.

TERMS—FIFTY CENTS A YEAR.—Ten copies of the CULTIVATOR and Ten of the ANNUAL REGISTER OF RURAL AFFAIRS, with one of each free to the Agent, Five Dollars.

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Editorial Notes Abroad.

No. XXXVIII---Farming in the Valley of the Clyde.

The public notification through our advertising columns of another Annual Sale at "Woodburn Farm," away among the blue-grass regions of Kentucky, is a forcible reminder that this Correspondence has never recorded the writer's past indebtedness to Mr. ALEXANDER for a visit at "Airdrie House," in busy and fertile Clydesdale. In 1859, just as the eager southron sportsmen were availing themselves of August 12th for a raid among the grouse,—a brief excursion in the Highlands, the notes of which were given in No. 15 of these letters, came to its conclusion at Glasgow; and the next morning found me some ten or a dozen miles to the north-west of that stirring city, strolling through the grounds, just adjacent to Airdrie town, which form the Scotch estate and residence of our noted Woodburn breeder. Now mostly laid down in pasture and rented, for the benefit of milkmen and others who find a market in Airdrie—a place numbering, I think, a population of twenty-five or thirty thousand—the manager, Mr. HENDRIE, was nevertheless thoroughly conversant with the system of general farming in vogue around, and in the discussion of Agriculture and Mining, the day passed only too rapidly away. Some rambling notes then jotted down, are perhaps still worth the space they will occupy, although submitted with some hesitation after such an interval of time.

Mr. HENDRIE, Jr., had lately entered upon the farm of Kirkwood, by Coatbridge. This farm had all been drained at distances of 15 feet, and a depth of from two to three feet—costing about £10 per acre (Scotch—nearly 1¼ acre English)—the 2-inch pipe tile costing 18 shillings sterling per 1,000. Liming the land is here highly thought of; a dressing of eight loads of 12 to 15 cwt. each, being applied per acre, followed by a light plowing, (say 4 inches,) when a spreading of dung is given, and a second plowing which again brings up the lime very nearly to the top. The effect was said to be greatest upon grass lands, and to be perceptible for a dozen years or more. The rent paid here is £2 10s. per Scotch acre. The rabbits are found exceedingly troublesome.

An approved rotation mentioned, was, 1, beans sown broadcast; 2, oats also sown broadcast; 3, green crop, potatoes and turnips, or possibly summer fallow; 4, wheat, sown with seeds in the spring; 5, hay crop, and, 6, pasturage, which is continued sometimes also for a 7th year. The land is mostly laid off in "riggs" of about 15 feet width. Manure is commonly applied on the lea, sometimes remaining spread for some time before the grass is plowed in, and also with all green crops. A farm of 130 Scotch acres will keep perhaps 12 or 13 milch cows and feed some cattle, beside sheep. Pasturage generally extends from 15th May to 15th November. With regard to cattle-feeding, Mr. H., Jr., mentioned in answer to my inquiries, having purchased 10 head the 1st Nov. previous at £10 each, which were sold at £17 10s. per head after 3½ months feeding, and he estimated the value of the manure from each as 30s. more. The rate paid for labor is 12 to 14 shillings sterling per week, or for the best £12 and board per half-year.

One custom in this part of Scotland was alluded to, which resembles very much our own "raisings" and such other neighborly assemblages;—when a new tenant enters upon a farm, all his neighbors around come together to *give him one day's plowing.* Thus when Mr. Hendric took Kirkwood, a forty acre field was all plowed by his neighbors in a part of a day, no less than 68 plows I think having been present at one time—a manifestion of good will which must have been very gratifying in itself, as well as from its rather unusual extent. This was one of those cases to which I had reference in remarking heretofore, that there seemed to me to be many points of resemblance between the farmers of America and Scotland.

The farmstead at Kirkwood was new, and a brief description of it will convey an idea of what is there thought to be a first-class modern establishment for a tenant. Mr. Buchanan, the landlord, had perhaps manifested in the present instance, however, a greater degree of liberality than might have been the case upon a farm of moderate size, with an occupant less favorably known.

The dwelling and farmstead are connected in a sort of hollow square, there being less objection to such proximity in Scotland than there would be under our hotter suns. I was kindly furnished with drawings of the whole, but shall be able to make myself understood, perhaps, without having them engraved. The size of the house, which has two stories and an attic, is 42 feet front by 26 deep, with a neat elevation looking to the southward; the entrance in the centre, with parlors on the west, and dining room, &c., on the eastern side. Set back 15 feet from the front line of the house, there is a story-and-a-half wing on each side, 13 by 13—that on the east containing the kitchen, with entrance from the rear, and connecting by pantries, &c., with the dining room. A projecting addition at the rear of the dwelling contains the library and office, overlooking the whole farmstead, with wash-house, &c., in the basement.

Beyond the side wings, the elevation shows the gables, on either hand, of the range of buildings forming the sides of the hollow square alluded to—having a front of 24 feet, and a depth of 105—and thus making the whole front elevation 116 feet in length. Following along the eastern side we have in succession, connecting with the kitchen already mentioned, laundry and servant's room, then the milk room, and scullery or churning room. Then come the cattle, occupying the remainder of this side—first with stalls for 18 cows, having a centre passage opening from the scullery; then the "queys' byre," or stalls for heifer or other young calves, and the extreme northeast corner occupied by a root house and loose box. The loft along this range is used for hay or straw

We now come to the northern side of the yard, in the centre of which is the gateway, 12 feet wide, for entrance and exit of teams, and on the left an open shed 12 by 26, while on the right are ranged the poultry house, a tool room, and the pig house and feeding boilers.

The buildings on the west side, which now alone remain, contain a cart shed 21 by 21, at the extreme end, and next the chaff, grain and thrashing rooms, the last being fed from the upper floor of a projecting building at the corner, 18 by 12, the basement of which contains a stationary engine. Then come the barn for straw, &c., and one or two loose boxes; and the range of horse stables brings us again to the front, connected to the dwelling by the 13 foot wing noted above, which is occupied with sleeping apartments for the men. The size of the court-yard within, must be about 68 by 75. West of the buildings, is the stack-yard, and, directly in the rear of them, extensive manure pits, to which the cleanings of all the stables are carted, and their liquid drainings carried, if memory serves me, through an underground piping. Here there were to be also, I believe, additional pig pens, and cattle-yards, together with water tanks filled from the roofs, &c.

It will readily be seen how great the convenience of such a series of buildings must be, constructed in the best manner, and including everything almost under a single roof. If the same strict attention was paid to cleanliness, we might suffer no inconvenience even in our warmer climate, from having farmstead and all thus compactly arranged. Those who have visited "Thorndale," for example, will understand that neither the inclosed yard nor the buildings *need* offend in any way eye or nostrils; while the former, with the central fountain it may be made to contain, in the midst of a tidy, well-gravelled surface, will present an appearance rather attractive than otherwise. As to convenience—here are, dining-room, kitchen, laundry, dairy, in immediate succession, as we have seen—the milch cows, calves, root room, poultry and pigs, following along in the order named—on the one hand; and, on the other, the farmer's office, the apartments of his men, and then his horses, succeeded by grain barns and thrashing apparatus and adjoining stack-yard, connecting lastly with store rooms for vehicles and implements, granary, sheds, &c. And there seems very little left to desire, when after crossing a roadway in the rear, we come at once among the other cattle and out-buildings, and witness the careful arrangements for the preservation of the manure. I cannot think but that our farmers might derive some useful hints from such a farmstead, and it is in that conviction that I have devoted so much space to render the disposition of all its details as clear as possible. If farther information upon any point is requested, I shall be glad to furnish it if I can. L. H. T.

◆

[For the Country Gentleman and Cultivator.]

"WHY DON'T THE BUTTER COME?"

I have milked from four to six cows all winter, and the butter has invariable come as quick as desirable. The milk for the day has been scalded in the evening by placing the pan over hot water on the stove, and when a sufficient quantity of cream was collected for churning, it was warmed just enough to have the butter of the proper consistency for working and salting when the churning was finished. How much to heat the milk is easily learned by experiment. If scalded too much, the amount of cream will be diminished, while just the proper degree will increase it.

I had almost forgotten one important item; the milk was kept in a warm room, and open to the air.

Ashfield, Mass. WM. F. BASSETT.

Farming Operations---Advice about Plowing.

We propose to avail ourselves of a series of articles lately contributed for the New-England Farmer by our occasional correspondent, Hon. FREDERICK HOLBROOK, to present, in condensed form, the advice and information furnished by him in response to the various inquiries of an intelligent beginner in farming—an old friend of Mr. Holbrook's, who proposes, as we understand, to devote the remainder of a life thus far engaged in other occupations, to the management of a farm, "provided the capital thus invested can be made to yield a fair return."

I. Compost for Corn Land.

Swamp muck, when more convenient to the proposed cornfield than to the barnyard, may be composted there to save hauling—the heaps of compost at such distances in the field as may be easy for distribution, 30 to 50 loads in each heap—composed of alternate layers of 4 to 6 inches of swamp muck and farmyard manure.* "The piles should be laid up as lightly as possible, and the height should not be more than about five feet, lest the bottom courses should be too much compressed to heat and ferment well"—the object being to sweeten and decompose the muck, as well as ferment the manure; and if properly laid, the piles will soon begin to heat. Mr. H. has "made up heaps of this kind as late as the 10th or 15th of April, overhauled them in two or three weeks after, and had them fit for use by the 10th of May," and the labor of this "overhauling," or shoveling over the piles 10 days or a fortnight before they are used, he considers amply repaid "in the superior fineness and effectiveness thereby imparted to the manure. He thinks it also "far better economy to compost green manure than to use it to any great extent alone."

"At the suitable time in spring, plow your greensward nine or ten inches deep, say with a sod and subsoil plow, if the land is free enough of obstructions to permit the use of that kind of plow; if not, then use a large enough plow of the common greensward form, to accomplish that depth of furrow. The plowing should be accurately and nicely executed, making the furrows meet and match well, and shutting the sod down beneath, securely out of reach of subsequent tillage. Then spread the compost broadcast on the surface of the plowed land, putting it on as liberally as your heaps will allow; plow it in about four inches deep, with a light, sharp plow, guaged to the right depth by a wheel on the beam. This incloses the manure perfectly with mellow earth, which, by its mellowness, absorbs and holds the goodness of the manure, and yet the compost is in a situation to be immediately, as well as at all other times, available to the growing crop, and to receive suitable atmospheric influences to promote a perfect decomposition, and to enliven and improve the upturned soil."

II. The Management of Swamp Muck.

1. Drain the swamp by a ditch as deep as the deepest portion of the muck, leading on to ground low enough to carry off the water.

2. Ditch around the particular piece you wish to dig; cart out to dry land at pleasure, and endeavor to get it there so that it may lay exposed to the air a twelvemonth before it is used for compost.

3. What is wanted for barn-yard use, should be spread in autumn, in sheds and elsewhere, 4 to 6 inches deep, to catch the droppings, liquid and solid; subsequent layers not quite so thick, applied two or three times in winter, and several weeks before planting time in spring; it will pay well for the labor to draw out into heaps in the fields to which the compost is to be applied, 25 loads or more to the pile, that a further heating and pulverizing process may take place before its final application.

4. If a water tight trench can be conveniently made behind the cattle in the stables, "say 20 to 24 inches wide, and 4 inches deep," about a bushel of dry muck to each animal can be used advantageously through the foddering season, by putting it daily in this trench—throwing it out with the wet portions of the litter, under a deep shed opening to the south, or into the cellar—thus manufacturing your compost from day to day, and making "superb manure for almost any purpose."

5. Horse manure, which is very active and volatile, may be preserved "from injury by overheating or loss by evaporation," by being deposited in a cellar or covered pen, frequently throwing muck upon it, and letting a few swine work it over.

6. Excellent composts for top-dressing grass land, or for fruit trees and shrubs, may be made of dry muck and "unleached ashes, using two to four bushels of ashes to a common cart buck load of muck, mixing the pile in thin layers at a time of each, and shoveling over once before using;"—or, "compost the muck with lime, dissolving a bushel of salt in water enough to dry slake about five bushels of lime, and then using one to two bushels of lime to a cart load of muck."

III. Deepening the Soil.

1. Almost any soil may be made to reach "a certain medium degree of excellence," but in going beyond this, much will depend upon what sort of subsoil there is beneath it; it may be too open or gravelly to retain moisture or manures, or it may contain poisonous qualities to the roots of plants. The soil may be deepened at little cost and to great advantage when it is underlaid "with a strong unctuous, fine-grained subsoil of loam or of clay loam, that holds fertilizing matter well, and on suitable exposure to the atmosphere slakes or disintegrates willingly, so that it is susceptible of a fine mellow tilth."

2. A subsoil of this kind, "brought to the surface by deep plowing, enlivened by atmospheric influence, high manuring and thorough cultivation, and mixed with the older surface soil," will give better tilth and increased production, the land "better withstands the peculiarities of a too wet or too dry season; the roots of vegetation have a stronger hold upon the soil, and the crops are not so easily injured by winds and storms; the manure may be suitably inclosed in mellow earth near the surface, where it has a greater and more lasting effect upon the land; and when the land is laid down to grass, it holds out longer in productive mowing, because the roots having a deeper range, do not so soon become entangled in a web near the surface, and the sod is not so soon 'bound out.'"

3. With a dressing of 25 loads of compost per acre, it would be safe to plow eight or nine inches deep where such a subsoil is turned up—with 40 loads per acre, still deeper—supposing that six or seven inches was the maximum depth previously attained. This is going down two or three inches at once; but if the "subsoil is poor, or inclined to be sandy or gravelly, and the surface soil is loose and hungry, the process of deepening must neces-

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* "With horse or sheep manure, or other strong stable manure where grain or roots have been fed to the stock, you may put at least two parts of muck to one of manure; but yard manure, being coarser and not so strong and active, will not bear more than equal parts of muck with it. In either case, however, somewhat larger quantities of muck in proportion to manure may be used, provided the muck has previously lain a year or more in pile on dry land, to drain, disintegrate, and in a measure part with its acidity.

sarily be more gradual, bringing up not more than an inch or so of the lower soil at each rotation of crops, and manuring that generously."

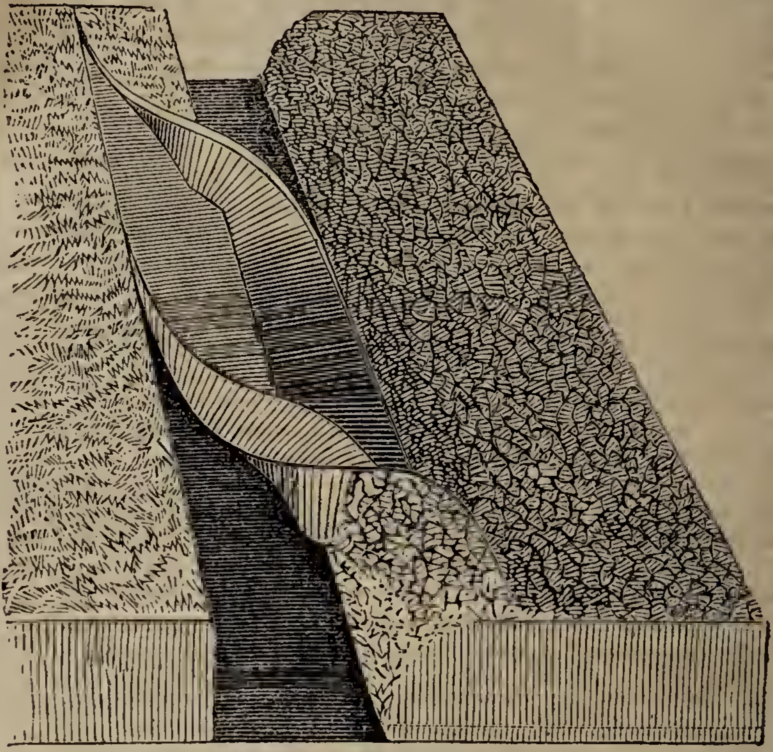
4. As in all other operations, good judgment must preside over one's attempts to deepen the soil, "and the particular circumstances of the case in hand must temper and govern the action. Where deep plowing is to be practiced, it is usually desirable to do it in the fall, and give the upturned subsoil the benefit of exposure to the action of the weather till the following spring. The common grub-worms and the cut-worms are a good deal disturbed and cleared out of the land by late fall plowing. But fall plowing is not absolutely requisite, and if convenience were better consulted by plowing in the spring, it may be done then with success."

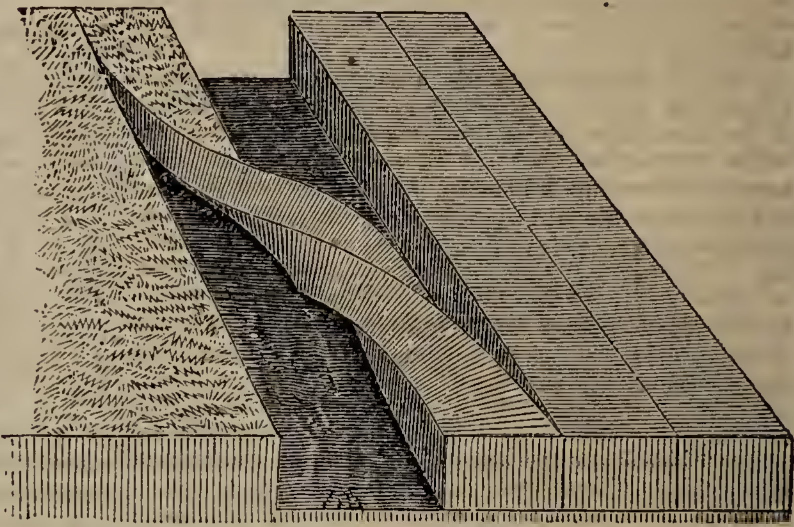
IV. Different Kinds of Plowing.

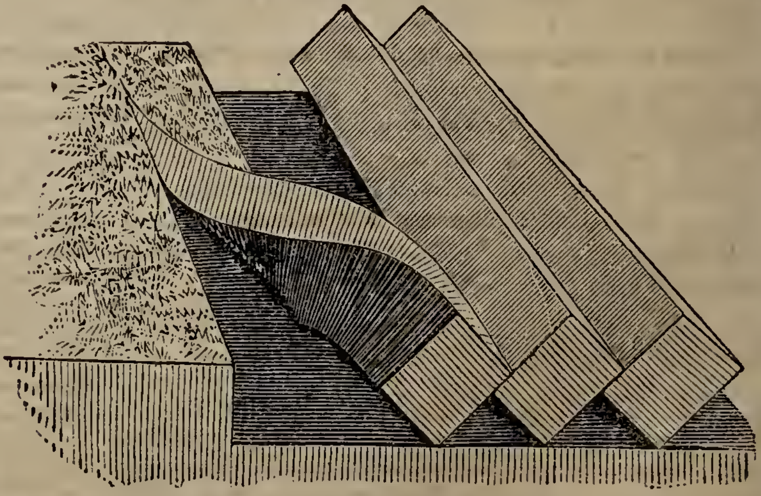
After observing very justly "that the mould board of the plow is a perfect and beautiful mathematical problem," Mr. Holbrook describes, with illustrations, the four different kinds of plowing, which a skillful plowman can perform, he thinks, with nearly the accuracy that is shown in the figures. We are indebted to him for the use of the cuts, and we quote his accompanying remarks with slight condensation:—

1. Sod and Subsoil Plowing.—This kind of plowing requires two plows upon one beam. The forward or skim plow should take a depth of not more than two or three inches, dropping the sod accurately into the channel, grass side down; and the rear plow should lift the remaining depth or under soil, raising it high, and laying it handsomely over the sod or skim furrow-slice, and well matched up to the previous furrow, breaking the soil well in the act, and leaving a clean channel behind for the reception of the next furrows. When a well-constructed plow for this kind of work is accurately adjusted as to the line of draught, and held so as to cut a uniform width and depth, and turn up the rear furrow slice to meet fully the preceding one, as represented in the cut, the upturned soil is laid over in a remarkably light and pulverized condition, making a very level and finely cracked and open seed-bed or tilth, superior to what can be done with any other implement yet introduced, and indeed superior to what the most accomplished spadesman could do in grass land by hand labor. For the deep breaking up of sod land, I would recommend the sod and subsoil style of plowing, on all such fields as are free enough of obstructions, and have sufficient regularity of surface to admit of the use of a double plow. Deep plowing is done with lighter draft to the team by this mode than by any other, because you can plow quite a narrow furrow in proportion to depth—say ten inches deep, by eleven or twelve inches wide, while by other modes you would be obliged to carry at least from a third to a half more width than depth to turn the furrow surely.

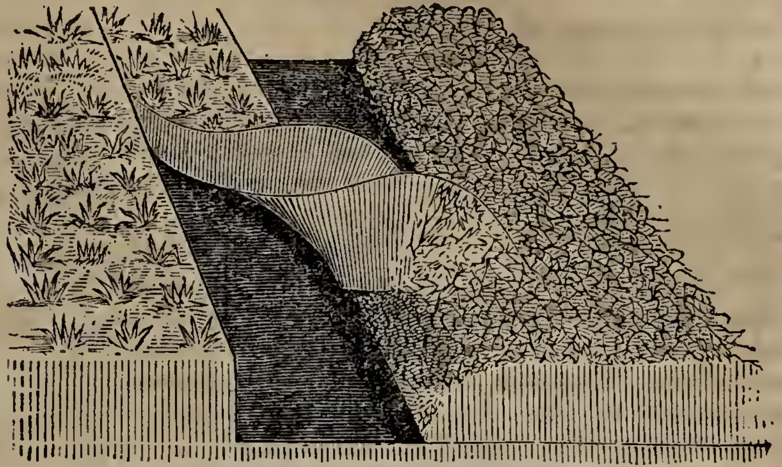
2. Flat Furrow Sod Plowing.—For the breaking up of bushy, rooty or uneven pastures, or any other grass land, when there are too many obstructions, or the surface is too rough, or the sod is too stiff and rooty with wild or swamp grasses for the safe and effective use of the double plow, the single or flat-furrowed greensward plowing is the better style. The accompanying cut shows at a glance the proper flexure and movement of the greensward flat furrow slice. For perfect plowing, with the lightest practicable draft upon the team, the furrow slice should have an exact mathematical curvature and equality of twist throughout its entire passage over—as is represented in the cut. It should be the effort and pride of the plowman to be able to adjust his line of draft, or his


1. Sod and Subsoil Plowing.


2. Flat Furrow Sod Plowing.


3. Lapped Furrow Sod Plowing.

hitch to the plow, so as to have it meet the peculiarities of the movement of the team—no two teams hardly ever drawing a plow exactly alike—so that his plow will readily take the precise right depth and width of the furrow, and hold easily in it, and so that he can perfectly and instantly control, or vary the bias of the plow, to meet the peculiar lay of the land anywhere, and bring the furrow slice over handsomely into its place, and preserve the perfection of his furrows. These little tricks and arts of the true plowman's trade should be learned by every one who pretends to hold a breaking-up plow, and surely no good farmer can consider them beneath his attainment. For your rough or unsubdued sod land, you will do well to plow the flat sod furrow, using a plow of sufficient strength and capacity for a team of four horses, or oxen, when required, and carrying a depth of furrow of 8 to 10 inches in good style.



4. Stubble or Old Ground Plowing.

3. Lapped Furrow Sod Plowing.—The annexed cut shows the proper movement and position of the lapped sod furrow. This is a style of plowing much practiced in Great Britain, and in some sections of our country where the soil is a stiff clay. As the cut shows, there is a little air space, or drain, under each furrow-slice, and the projecting angles of the surface of the plowed land present the stiff clay soil favorably to the action of the harrow or other surface-working instrument, for the raising of a fine tilth or mellow seed-bed. To execute this mode of plowing in perfect style, the furrow-slices must not be cut more than one-third wider than they are deep, for if they are, they will not stand at a steep enough inclination, or rather at an angle of forty-five degrees, which is the best inclination. The usual proportions of furrow-slice among finished plowmen, are about 6 by 9 and 7 by 10 inches. For a new country, where the land has not yet become cleared of obstructions nor its surface much smoothed, this is a difficult style of plowing to execute well, and indeed it is better adapted to an old than a new country. For plowing more than seven inches deep, the sod and subsoil style of plowing is preferable, even in clay land, being easier of good execution, lighter in draught, and requiring less width of slice than even the lapped style, and therefore making a finer tilth of the clay.

4. Stubble or Old Ground Plowing.—The annexed cut shows the proper style of stubble or old ground plowing. The furrow slice should have a short decided twist, be raised in turning, for the more effectual covering in of the stubble and other trash, and be turned quickly and strongly, so as to force the soil all over to an inverted position, breaking it fine in the act, and leaving a clean channel for the reception of the next furrow. This is the kind of stubble plowing you want. I have seen stubble plows at work of such construction—raising the earth so high, turning it so forcibly, and withal in such a sort of spray from the rear of the mould board, that you might lay down a full-sized bundle of straw or stalks, and passing by it with the plow cover it entirely out of sight with a single furrow. You can readily see on comparing the cuts, that the long, gradual, easy twist of the green sward furrow-slice, is not adapted to good stubble plowing, nor is the short abrupt twist of the stubble furrow slice, at all suitable for easy, handsome and effective, green sward plowing. Each requires its own peculiar form of plow to produce the best effect.

V. Cultivation after Plowing.

1. After the deep plowing, and just before planting time in spring, spread your compost manure upon the plowed surface and turn it in four or five inches deep with a light plow guaged to the right depth by a wheel on the beam. Plant the land with corn or other hoed crops.

2. If you have leisure after harvest in the fall, and if not, then in early spring, run a heavy harrow over the field, once in a place, and straddling a corn row each time, pulling down the corn-hills and scattering the stubs so as to facilitate their complete burial out of the way. Plow the ground preparatory to seeding it, turning it an inch or two deeper than you did in plowing in the manure, so as to bring the manure near the surface, and still with an inch or so of earth above it to protect it from loss.

3. Then stock the land to grass, with grain. Wheat and barley are the best grains to seed with, as the grass is less liable to be smothered by those crops than with oats. But if oats are a more profitable crop to raise, then stock with that grain, sowing, however, not to exceed two bushels of oats per acre. They will then tiller out enough from the root to grow all the seed-bearing stalks you need for a good crop, or that will be well for the young grass, and yet there will be room on the surface of the ground for the grass to get a sure foothold.

4. If you would like to improve more land annually than you care to plant, and can devise means for enriching more, then plow up grass land with a deep furrow in August, manure on top of the furrows with fine rotten compost, harrow in the compost, and seed at once to grass, with or without a crop of winter wheat or rye, as may appear to you best.

5. If the land is not subject to standing water at any time, and is a little rolling withal, you may perhaps succeed in raising a fine crop of wheat. If a grain crop is to be taken off the land, spread a heavier coat of manure than if grass seed alone is to be sown. Fifteen to twenty loads of manure for grass alone, will be as good to the land as twenty-five or thirty loads if a grain crop is taken off. Sow only herds grass and red top in the fall or in August, and put on clover early the next spring.

Conclusion---Capital in Farming.

From Mr. Holbrook's concluding paragraph, we condense the following excellent advice:

1. In connection with abundant supplies of swamp muck, all the manure should be made which the farm will profitably produce, in order to mix with the muck, thus increasing the compost heaps.

2. Study to find ways for feeding out the products of the soil upon the farm, so as to get about as good returns for them in the growth and improvement of stock, the wool, meats, dairy products, &c., as though they had been sold off for cash. Thus you will give back to the farm the manure its crops can make, increased withal two or three times in quantity, by judicious mixtures with it of your muck, and any and all other available vegetable or earthy substances which contain fertilizing qualities.

3. Where one has capital, he will see times when he can even buy oil-meal, or some kinds of grain, and feed it to his stock at a profit, besides enhancing the strength and activity of the manure. If such opportunities occur, you are able to take advantage of them, and thus in turn increase your own farm products in these articles.

4. With capital, moreover, you can take advantage of times and seasons, buying or selling stock, &c., at the right time, and some years feeding more, and other years less stock, according to circumstances. Even a small floating capital to use at will in farming, is oftentimes a decided help towards success in the business, making, perhaps the difference between a profit or a loss on a crop.

[For the Country Gentleman and Cultivator.]

ENDLESS-CHAIN HORSE-POWER.

J. B., who inquires about endless-chain horse-powers and thrashing machines—page 208 of Co. GENT.—appears to be in as great a quandary as I was when I first commenced farming. But, I trust, his doubts and fears can be readily removed.

There always has been in this town, a very great prejudice against endless-chain horse-powers; and they have been so denounced, by men who go about the country with the large eight and ten-horse sweep powers, thrashing and sawing wood, that farmers are really afraid to have anything to do with them. But in the towns adjoining the one in which I reside, where there are better and more economical farmers in every respect, the endless chain powers and the thrashers are so numerous, that a ten-horse sweep-power is seldom met with.

To give you an idea of the prejudice against this kind of horse-powers, I will state, that when my power, which is in good order, was set up last week at auction, no one would bid any sum on it, and so we were obliged to pass by it.

The great cry against them is, "they are a notorious horse-killer." This little short sentence embraces the whole objection and argument against them; and I do not fear to say, boldly, that *it is no such thing.* The prejudice is totally groundless, and the conclusion a very wrong one; and I can prove it to the satisfaction of any man who will not be, or has not been, swayed by prejudice.

My Experience with Endless-Chain Powers.

In the year 1846, I purchased one of Wheeler's one-horse powers. With horses which weighed about eight hundred pounds each, with a very poor thresher we could thresh with ease seventy or eighty bushels of wheat per day, and more than twice as much oats. When sawing fire-wood, three men would saw about one cord per hour, and with the saw that I now have, the same horse and hands would be able to do double that amount. Besides threshing and sawing fire-wood, I used this one-horse power for driving my turning lathe, grind-stone, fanning mill, straw cutter, and for slitting lumber of all kinds for my buildings, and sawing lath, &c.

Not being exactly satisfied with a one-horse power, in 1853 I made a two-horse power of the one-horse power by cutting the rods in two and welding in a piece of rod, so as to make them longer, and by making a new platform. Now it works most complete. I can saw three cords of wood per hour with two horses, with a circular saw; and with a drag-saw, with no help but a boy ten years old, I sawed off logs twenty-six inches in diameter in seventy-five seconds per log, including starting and stopping time; drive my grist mill, clover machine, and horse corn sheller, with which we can shell, clean and deliver in the bag, ready for market, seventy bushels of shelled corn per hour; and by driving business a little, we could do more than this. But this is ordinary work with an ordinary elevation of the power.

Two years ago I had a good crop of barley, and could not get it half in the barn; and so we would haul a load to the barn, and put the horses on the power, and thrash it about as quickly as we could pitch it up into the mow, and with the same help that was necessary to merely unload it.

For several years past I have raised more or less buckwheat, and by having a horse power and thrasher of my own, I was enabled to get my buckwheat all thrashed before my neighbors had really thought of thrashing theirs. Last fall was a very unfavorable autumn for securing buckwheat; but as soon as the buckwheat appeared at all dry we could thrash; while my neighbors lost full one-half of their crop before they could possibly get it thrashed. But this is not all. As my buckwheat was secured before it had become water soaked, it would make much better flour, and millers were willing to pay from four to five cents more per bushel than they would pay for that which had been exposed to storms for several weeks.

My thrasher stands on the second floor of the barn, and the grain falls on the first floor. Therefore all the help that is needed is a boy to keep away the straw, which a very small boy does with ease, and one to feed, and one to pitch the grain off the wagon. As a general thing, I thrash my grain in the winter, when we have but little to do, and when we can use up the straw economically.

A few years ago, as my father-in-law was accustomed to thrash all his grain, and saw all his wood by hand, which kept them worked down all winter and spring, I induced his son, against the remonstrances of his father, to purchase a two horse power and thrasher.

The result was, it removed, most effectually, all their prejudices and doubts, and fears lest it would not pay, and they were enabled to do their thrashing and sawing wood in a very short time, without working like slaves, and he soon earned enough, working for his neighbors, to pay for the machine. There are two sweep powers for sawing wood within half a mile of him, and while they are able to get a few jobs, he has more than he can saw. He makes from $3 to $4 per day, and does not work very hard at that. I should hardly know how to get along on a farm without a two-horse railway power. S. EDWARDS TODD.

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[For the Country Gentleman and Cultivator.]

COMPOST OF POULTRY MANURE.

MESSRS. EDITORS—Being myself deeply interested in anything pertaining to agriculture, I send you a bit of my experience in making a small quantity of manure go as far as possible, it being the farmer's aim on a poor piece of land to use his manure to the best advantage.

I made a compost of hen manure, night soil, stable manure and earth. I kept it in my hen-house. When I shoveled it over from time to time, I wet it with the suds from the washroom which kept it moist, so that all the hard lumps became soft and easily mixed.

When my ground was ready for planting, I first went along and dropped a handful of the compost, then dropped the corn on it. And to try if it was going to pay me for my trouble, I skipped two rows through the fields, and as a consequence, where I put none of the compost the corn looked nearly as yellow as the corn I planted, while the other looked nice and thrifty. The difference was very plain to be seen, not only while growing, but when harvested. It proved quite a paying experiment to me.

Fairfax, Va. F. V.

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[For the Cultivator and Country Gentleman]

How to Grow Apple Trees at the West.

MESSRS. EDITORS—I have thought I would say something in regard to the cultivation of the apple tree. I have been engaged in that business for the last five years. I am now in latitude 37. I have 42 varieties in my orchard, and I deny the statement of many writers, that there are some varieties that will not grow well at the west. My trees are all cared for alike, and with one exception grow alike. The Summer Rose grows slow but thrifty. If those who wish to have orchards in this western country, would spend more time in the care of their trees than in the abuse of nurserymen, we should have fine young orchards. I know men who bought their trees when I did, that have not got a tree now. My plan is to plant my trees 33½ feet apart, and use nothing but surface soil in planting. I mulch in March with straw manure—use soap twice a year, in May and September—head my trees low—fork twice a year, in July and December, and keep all weeds down under my trees, and keep out all animals but hogs. When one year set, I mulch with lime, taking care not to let the lime come close to the trunk. With this care, the country will soon be full of fruit. My soil is a sandy loam, with lime-stone clay subsoil. I have trees measuring four inches in diameter, five years set, with tops that will bear one bushel of fruit. WM. M. JEFFREY.

Oak Hill Nurseries, Ill.

[For the Country Gentleman and Cultivator.]

Old Corn vs. New Corn---Food for Hogs.

We are compelled to dissent from what we understand to be the statement of J. M. Conner, as quoted in the Country Gentleman of 10th January. If we do not understand his statement, this writing may have the tendency to bring unknown facts before our minds. We are always grateful for knowledge. Knowledge is a farmer's power.

J. M. C. states that old corn is worth from 15 to 25 per cent. more than corn just harvested. Mr. C. evidently refers to corn "on the ear," and to the value of a bushel of old compared with a bushel of new. His meaning must either be that a bushel of old corn is worth so much more than a bushel of new, or that a given quantity of of corn gains in feeding value by "being kept over." If the former be his meaning, as we are inclined to think, then his general statement, that "all pork should be made from old corn" is not correct. Let it be admitted that the bushel of the old is worth so much more than a bushel of the new. This is not a fair comparison, unless we also take into account the per centages in favor of the new corn.

1. *Bulk.*—Many trials have shown that corn kept over will lose from 25 to 33 per cent. of its weight, ordinarily 25, but in some seasons, dent and hackberry varieties have lost 33⅓ per cent. So that to obtain a just estimate a bushel of new should be compared with but three-quarters or two-thirds of a bushel of old.

2. *Handling.*—Where wages are high the amount of labor required to crib any large quantity is no small item, and this must be placed against the old, as in fair weather new can be fed, and often is, at once from the wagon, thus saving a double handling.

3. Keeping over requires for large estates an enormous quantity of crib room.

4. The interest saved must also be put in the account in favor of the new.

Now as to the second view. Does corn gain in value by keeping over? If it does, this gain must result from some chemical change. Water is lost, most certainly; but the presence of this water in the new grain, enables the feeder to dispense with other liquids, or the same in other form. Does any chemical change enable the old to be more readily assimilated or more entirely digested? So far as our investigations have proceeded upon live weight, excrements and food, we have not been able to detect this more favorable combination. If others have, we should be glad to know it.

With J. M. C., we would condemn the too common practice of half-starving during the latter part of summer; and we have often seen this to be the case with those who thought they had enough old corn to last through. Most certainly enough old corn should be kept to supply any deficiency that may occur; it is well to have on hand more than enough at any time. But corn or no corn, no half-starving during the latter or any other part of summer should be permitted. We have found it well to turn our spring pigs—and for our own use we want no pork from a pig over a year old—upon good clover pasture, giving them daily portions of meal mush; thus until last of July, when the King Philip and other early kinds of corn are ready to cut up—then let it be corn, corn, with any other variations, such as apples, peaches, potatoes cooked, &c., as may be at hand; then with a good breed, such as the Chester or Bedford, and Suffolk or China cross, we may expect good pork and enough of it.

With such treatment, 1½ pounds per day of gain may be expected from feeding till killing time, if the breed will "take fat" and has "size." We have had a gain of three pounds per day for a time, and suppose that others have had greater, but such cases are the exceptions.

We have written this much with the hope of drawing out some of our hog men. We need more facts; we can know, and should, as much as the mechanic, work by rule, not by guess, fancy or whim. H. T. Vose.

Camba, Jackson Co., Ohio.

[For the Country Gentleman and Cultivator.]

CURE FOR SWEENEY.

Messrs. Editors—For the benefit of your readers I send you the following receipt for Sweeney. I have never had occasion to try it but once, when it effected a complete cure.

I am inclined to think that Sweeney frequently occurs without any previous injury, and that the injury, if there be any, is in the shoulder—also that the disease often continues after the cause is removed.

To three-fourths of a pound of bacon, add three tablespoonfuls of salt, (rock salt is best,) and what rosin will lay on the point of a case-knife three times, and the yolks of three eggs. Put your bacon on the fire and try it out; then add your rosin and salt, and simmer slow till it dissolves. Set it off and let it cool until you can bear your finger in it. Then beat up your eggs and stir them in until cold.

Apply once or twice a day, and bathe in with a hot iron. (Old lard will do instead of bacon, if the latter is not at hand.)

Will "J. S." and "W. S." please give this a thorough trial, and report the result. w. r. *Nebraska City.*

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[For the Country Gentleman and Cultivator.]

RAISING WHITE BEANS.

After various experiments in raising beans, I have made up my mind that the following mode, which I have practiced the last few years, is the most economical, &c.

The ground should be worked with cultivator or otherwise, the last thing before planting, as it is cheaper doing it before than after planting. Then take a hand corn-planter, and set the hills about one foot or a trifle more apart. This can be done by marking, or with a little practice, can be done without marking.

The advantages are these—the hoeing can be done with about the same time to the hill, as after they have been plowed or cultivated; and then you can get about two or three hills, where you have but one in the common way, where planting is done with a machine. The plants are more compact in the hill, and consequently less labor to hoe and pull them. Cover from one to two inches deep. Four or five plants in a hill is better than more. Care should be taken to plant none but sound seed, as beans will sometimes have life enough in them to come out of the ground and then wither up. A. Moss.

Belvidere, Ill., April 4.

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[For Country Gentleman and Cultivator.]

The Cultivation of Chinese Sugar Cane.

Select a piece of ground, situated in the warmest part of your farm, (that is the most exposed to the sun.) It should be plowed very deep, and harrowed well before planting, which should be as soon as convenient after plowing, because it comes up better when the ground is fresh. It is a very good plan to pour warm water over the seed the night before planting.

Plant very early in spring, in furrows about four feet by two, so that you can plow it when it gets up nearly full height. The leaves should be stripped off as soon as the cane commences to get ripe. It should then stand three days, and be made up.

We have tried several ways, and the best is to use kettles which will hold 30 gallons or smaller—strain the juice into the kettles—boil slow till the scum is mostly off—then crowd the fires, and never change syrup from one kettle to another. Some think that it will not make sugar. We have made some that was manufactured from cane of our own raising. It is very dark, and tastes like maple sugar. I think with improvement, we can make a very fine sugar from it. h. h. w. *Big Run, O.*

[For the Country Gentleman and Cultivator.]

The Maple Sugar Crop of Vermont.

Messrs. Editors—The maple sugar crop of Vermont is one of the most profitable of any produced in the State; and there is probably no branch of the farmer's business that affords as much income and clear profit, according to the amount of capital invested, and the amount of labor expended in the manufacture of it. Only a small capital is required to carry on the business, and the labor is performed at a season of the year when no other branch of the farmer's business can be successfully prosecuted, so that it occupies a portion of his time which otherwise would be of little value for other purposes, and makes it realize more profit than that devoted to any other part of his business during the year.

The maple sugar crop of this State for 1857 was estimated at over 8,300 tuns; which is nearly half of the maple sugar crop of the United States, as returned in the census of 1850, and about one-eighteenth of the sugar crop of the Union. In this town there was an effort made in the spring of 1857, to ascertain the amount of sugar made in the town that spring; and the statistics returned showed that it amounted to about 200,000 pounds. The census was taken by school districts, and the following is an abstract of the reports:

School Dist.	Whole am't made.	Most made by one man.	Least made by one man.	Sugar lots in each Sch. dis.
No. 1, ...	12,800	3,500	500	9
" 2, ...	34,675	3,600	50	26
" 3, ...	20,273	2,000	200	21
" 4, ...	4,380	1,200	55	8
" 5, ...	17,874	2,994	20	12
" 6, ...	25 701	4,375	50	18
" 7, ...	3,000	900	200	7
" 8, ...	6,675	1,650	650	6
" 9, ...	10,400	2,700	400	10
" 10, ...	18,020	1,900	50	17
" 11.	13,600	2,150	500	12
" 12, ...	8,910	2,000	30 (2 trees.)	10
" 13, ...	4,578	1,400	20	8
" 14, ...	16,150	4,000	300	14

The sugar crop of 1858 was considerably less than that of 1857. The statistics of the crop for 1859 were again collected. These I have not access to, yet the following item published at that time in the Vermont Phœnix, gives a short abstract of the account: "During the past season there was manufactured in the town of Wilmington, 202,743 lbs., or over one hundred tuns of maple sugar, of which 34,115 lbs. was made in one school district. In one other district of 62 inhabitants, twelve tons were made. One man made 200 lbs. from twenty-five trees! Here are some figures hard to beat."

From what information I was able to obtain, I think the crop of 1860 exceeded that of 1859, although no exact returns were made. The crop for the present season I think will fall a little short of that of last year, though I have no doubt that it will amount to 200,000 lbs. The price of sugar varies according to the price of foreign sugars in market; this year it is lower than it has been for several years—last year it was higher. There is usually some four cents per pound difference in the price of sugar—according to the quality. This year it sold from 7 to 11 cents per pound. Some years it has been sold from 9 to 13 cents per pound. Small lots of the first sugar made in the season, generally sell higher than the regular prices. The principal part of the sugar sold is run in cakes of small size, and put up in boxes weighing from 50 to 100 lbs.—though for two years past, some have put it into tubs holding about 50 lbs. This is a much better way to put it up for family use than to cake it, as it is not made as hard, and when the molasses is drained from it, it makes a dry and convenient article for using in any way that is wanted. The most of the sugar is sold in the cities and large villages of Massachusetts, though there is considerable sold in Rensselaer and Albany counties, N. Y. Some of it goes to New-York to supply orders of private families, and last year some small lots were sent to Illinois and Minnesota.

A few figures will show the magnitude and importance of the sugar crop of this town at the present time. Calling the amount 200,000 pounds made annually, and it will amount to 140 pounds to each inhabitant in the town. Dividing it among the 14 school districts, it will give about 14,000 pounds to each district. Reckoning the price of sugar at 9 cents per pound, and it will amount to $18,000 for the town; this divided among the school districts, would give about $1,285 to each district, or nearly $14 to each inhabitant of the town. From the foregoing estimates it will be seen that this town has a reliable and unfailing source from which to obtain a supply of sugar for her own consumption, and a surplus to spare; and should it be necessary, the amount of sugar annually made could be largely increased, as the sugar orchards on many of the farms, have not as yet been fully worked. This fact is probably true of many of the mountain towns in this State, especially in those towns where the later improvements in the manufacture of sugar, have not been introduced. The ready sale of maple sugar for a few years past, and the prices which it has brought, I think are sufficient inducements for all who have the opportunity for doing so, to engage in the manufacture of this article, and thereby add to the wealth of the country, and to the amount of their individual incomes.

Wilmington, Vt., 1861. C. T. ALVORD.

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[For the Country Gentleman and Cultivator.]

BLUE-POD AND PEA BEANS.

Eds. Co. Gent. and Cult.—In your remarks upon Field Beans, No. 17, page 266, middle column, current vol. Co. Gent., reference is made to the blue-pod and pea bean; and, that you are not acquainted with the variety called blue-pod is stated, and should infer that the pea bean are not cultivated in your State to any great extent, or they would be quoted in the New-York "price current," and that you would not so nearly confound them with the marrowfat bean.

The blue-pod and pea bean are grown here for family use and the Boston market, quite generally—these and the marrowfat, probably more than all other varieties. There is but little difference in the cultivation of the blue-pod and pea bean; often they are mixed, and in fact oftener than otherwise, because many who raise them do not know or make any difference with them. They are both a bush bean; grow so much alike one would not scarcely notice any difference, unless comparing them, or well acquainted with each variety.

They are almost exclusively grown between the hills of corn, being small stalked, and not till grown several years upon the same soil, and at that—without making any selection of seed to prevent it—do they twine around the corn.

If the land is in good tilth, and it is a good bean year, they may grow to one and a half feet high, but usually about one foot is the average hight.

Four to six beans in a hill, planted June 1st to 15th, after the corn is up, is a favorite mode with many, rather than to plant with the corn, because they are liable to get the start of the corn; and beside, if a hill of corn fails, two hills of beans can take its place.

In 1859, on land poorly dressed, it was not at all difficult to find single stalks which produced sixty to seventy-five pods, containing four to six ripe beans; and a friend found one hundred pods, averaging five beans each, on land well manured, of the pea bean variety.

They are A. No. 1 flavored bean, having no strong taste or smell, capable of being baked and set upon the table about as whole and in as perfect form as before cooking; and seldom splitting but little in thrashing and cleansing for market—ripening so evenly that no trouble is encountered on this account, but nearly all are perfect little beans.

The blue-pod, if any difference, is rather more liable to run or vine some years than the pea bean, but this is easily remedied by a change of seed or selecting seed from those hills which do not run. They yield about equally, but those who have tried them generally give the preference to the pea bean because they are rather the most vigorous growers and command and the same price here, though inferior in flavor.

Many contend that they yield as well as the marrowfat, among corn, and being much easier cured, are preferred on this account. The marrowfat have large stalks and leaves, and split badly in threshing, and, if after they are nearly dried, a heavy rain comes upon them, they will burst open so that it spoils them for market.

The pea bean is nearly a round bean though a little longer than otherwise; yet, this may not seem correct because there are different kinds often seen, still they are pea beans. The blue-pod is a little, perhaps a quarter, longer than the pea bean.

Now Messrs. Eds., if this is not more beans than you want, if you wish, I will send some blue-pods for trial this year, to you. O. W. True.

Elm Tree Farm, Maine.

[For the Country Gentleman and Cultivator.]

RAISING CALVES.

Messrs. Editors—The raising of calves is a subject which particularly demands the careful attention of every farmer; for upon the manner in which the calf is reared, depends the value of the animal when grown. If due attention was paid to this branch of husbandry, much wealth would annually accrue to the country.

It is a very easy matter, by neglecting the calf, to make the cow worth ten or twenty dollars less when grown.

How many diminutive and undesirable specimens of cattle do we find all over our land, and yet were an inquiry set on foot relative to the manner in which they had been reared, in nearly every case the facts would be something like the following:

The calf was taken from the cow, and perhaps allowed new milk until learned to drink, then skimmed milk followed, (the quantity depending upon how many pigs were kept,) which shortly gave way to sour milk, followed quickly by total abstinence from all drinks except water, and sometimes only a partial supply of that.

The consequence of this *modus operandi* always is, that the growth and development of the calf are checked, and the size of the animal when fully grown, as well as its symmetrical proportions, are deficient.

Undoubtedly the best method of raising calves would be to allow them to run with the cow; or, if learned to drink, be supplied with new milk; but this method is too expensive for general adoption; therefore some method is required which shall be economical, and at the same time serve best to promote the thrift and development of the calf.

From experience upon this subject, I would recommend the following plan: Let the calf be taken from the cow soon after calving, and put into a *clean*, *airy* place, and supplied with new milk. In a short time it will begin to eat other substances, and may then be fed a little meal daily, and, as the calf increases in age, it will eat it more readily. The quantity of meal may then be increased, and the quantity of milk diminished, until the latter is discontinued entirely.

In this manner the growth and development of the calf are not retarded, and so gradual will be the change from the milk to the meal, that the calf will not experience the deleterious effects of weaning.

After beginning to feed meal, the calf should be placed in good clover pasture, and kept there through the summer, and the supply of meal continued. The calf should also have free access to water at all times.

The best meal for feeding calves, is perhaps a mixture of oats and barley or oats and buckwheat, or either or all.

The winter care of calves also demands much attention. They should be placed at the commencemnet of winter in warm apartments by themselves, and liberally supplied with good hay, a little meal, roots and plentiful supply of pure water.

In this manner, I think stock, which will be desirable in every point of excellence, may be profitably raised.

Wilson, N. Y., 1861. R. D. KNOWLES.

[For the Cultivator and Country Gentleman]

LIGHT FOR FARMERS.

What shall we farmers use for lighting our dwellings? Camphene and burning fluid are considered so dangerous as to deter many from using them, and kerosene, which has been considered safe, has in several instances lately exploded, causing death; and the lunar oil is good for those who wish to convert their dwellings into lamp-black manufactories, as it will throw off lamp black equal to a small volcano, throwing out cinders, injuring everything in the room. Is there anything we can substitute for the old fashioned home-made dipped candles, that would be cheaper or better than them for farmers who have their own tallow? J. W. Lequear.

The old fashioned candle, for ordinary use, and for those who are willing to be troubled with snuffing it once each five minutes, is cheapest, safest, and best. Dr. Jackson says that kerosene explodes in consequence of the presence of other volatile matter, which is expelled when the kerosene is properly manufactured; and that such as is explosive may be readily detected by placing a little in a vial, setting it in warm water (say 100 degrees Fah.) and placing a burning match at the mouth of the vial, after the lapse of a short time. A slight explosion will take place, if the keroseno contains unsafe ingredients.

An experienced housekeeper says that a good way to warm and light dwellings, is not yet discovered; but as many ingenious men are now engaged on the subject, possibly the child is born that may see its accomplishment; she thinks it safe to assert that the discovery will be made some time within the next three thousand years.

[For the Country Gentleman and Cultivator.]

DRAINING---No. 4.

Messrs. Tucker & Son—In my last letter on the subject of draining, published in Co. Gent. for March 14, I promised to give my experience in draining quicksands. The best manner, I have found by experience, is to take such lands when quite dry—say after haying and harvesting late, in August or early in September—when very little or no water is to be found at the depth you wish the drain—then put in what help is necessary to do the work before the rains come to saturate the soil, and the work can be done in a very satisfactory manner, without the running and caving process always attendant in such soils in a wet time. I have found that drains put in with tile at such a time are much better done, and are in no danger of filling with silt when the rainy season commences; besides it is very much nicer working in such soils in a dry time than in a wet one. I have tried to drain such soils in both wet and dry conditions of the soil, and have come to the conclusion that I would not attempt draining such soils only in a dry condition, and have found the drains put in when dry to work well. Care should be taken to have the fall carefully graded, so that the water will run rapidly to the outlet, and not have dead water standing in the tile at any place, or silt will collect and obstruct the passage of the water to the place of discharging the same at the outlet. I think the instruction given on the subject in the different soils mentioned, will enable any person to drain his land with economy—also that it will be well done, as I have some 50,000 tile doing duty without a failure, to my knowledge—also many rods of stone, and from the letters I have received since writing these articles, think some, at least, of your subscribers will be benefitted by their perusal. J. Talcott. *Rome*, *April* 30, 1861.

[For the Country Gentleman and Cultivator.

Remedy for Brown Bugs.

I will give you a remedy for the small brown bug which is very troublesome on our tomato plants. Take one or more shingles, according to the size of the bed—cover them with tar—lay them in different parts of the bed—then take a bush and brush on the ground from each end of the bed toward the shingles and they will hop on the tar, and once on they will stay there. A Reader.

[For the Country Gentleman and Cultivator.]

No. 27---Disappearance of the Wheat Midge.

In the present communication I propose to consider the recent disappearance of the wheat midge over considerable parts of the country, and to relate the circumstances under which this event has occurred within the sphere of my own observation.

In the summer of 1859 it was reported that in Seneca county and other districts in the central part of our State, the wheat midge had vanished to such an extent that the wheat crop was sustaining no injury from it. I was inclined to be skeptical as to the correctness of this report, for here in the eastern section of this State I met with the larvæ of this insect in the heads of the growing wheat quite as numerous as they had customarily been in previous years, and the crop from several of the fields in my neighborhood on being thrashed was found to be materially diminished from this cause.

That this insect was still with us in full force was further evident from the flies coming in numbers about the lamps in our dwellings in the middle of June last, as narrated in my preceding communication. On thus seeing the parent insects so plenty at that time, I doubted not but that I should a month later meet with their progeny, the yellow worms in the wheat heads, the same as in former years. But on going to the wheat fields in July, to my great surprise, none of these larvæ could I find in any field within a circuit of several miles around me. As this was such an unexpected and important fact I was anxious to know if the same exemption prevailed through the country generally. As this insect originally came to us from the north, in the State of Vermont, just before the wheat harvest I made an excursion in that direction to a distance of fifty miles, inspecting every field of this grain which I came to along the road. And though, in consequence of the uncertainty of this crop since this insect has been in our country, the wheat fields which I passed were noticed to be small and far between, they were in every instance observed to be remarkably fine, the heads of the grain large and smooth, and in no instance ragged and torn by the yellow birds to feed on any larvæ nestling therein. And on opening the heads of every variety of appearance selected along the edges of several of these fields—for it is on the edges that these insects are most apt to occur—not a solitary larva was anywhere met with. Thus over an extent of country some sixty miles in length in Washington county, in this State, and Bennington and Rutland counties, in Vermont, I am assured, by careful personal observation, none of the larvæ of the midge were to be found the past season.

In the central part of the State, though the wheat crop the past season is reported to have been less productive than it was the year before, it is said to have received no injury from this insect.

It was circulated in the newspapers the last summer that in Canada West the wheat crop was remarkably promising, and was escaping from molestation by the midge, which insect had been subdued by a parasitic insect foe to it that had appeared in that province.

On the other hand, in Western New-York, particularly in the Genesee district, this insect continues to be as common as heretofore. Different persons residing in the vicinity of Rochester, whom I met at the recent annual meeting of our State Agricultural Society, informed me that they examined the heads of their wheat both last summer and the summer before, and found the yellow larvæ therein quite as numerous apparently as they had been in previous years. Yet they say the insect seems to have become inert, as though it was passing into desuetude, for it certainly has not injured the wheat crop the two past years as it has done before. We, however, cannot think these insects have really lost any of their energy. To rear a given number of them to maturity will probably require the same amount of nourishment one year that it does another. It is therefore more probable that some peculiarity of the seasons has so favored a vigorous growth of this grain that it has been better able to withstand and recover from the drawback it has received from this enemy.

It appears then, from what information we possess on this subject, that although the wheat midge still abounds in some sections, over a large extent of country it has become remarkably diminished within the past two years, and in some places has entirely disappeared.

Though I was unable to discover any of the larvæ of this insect the past summer, I cannot suppose it to be totally extinct in the district which I traversed. Scattered here and there in the wheat ears, so sparsely as to elude detection, it is probable that a few of these larvæ were present. But their numbers must be so extremely limited that it will be impossible for them to multiply sufficiently to do any appreciable injury to the wheat crop this present year. We hence obtain this important practical deduction from the facts stated—wheat may be sown this present spring, in this part of the country at least, with the fullest confidence that it will receive no detriment from this insect. I tell my neighbors they may safely devote as much land to this grain now as they were accustomed to do thirty years ago, before the midge invaded us, for, though other casualties may perchance occur to prevent so abundant a yield as we had the past summer, this most dreaded enemy will not trouble them to any sensible degree the present year.

What its future history is to be, time only can show. Genial seasons, or other circumstances favorable to it, may cause it again to multiply, and in the course of two or three years become as great a pest as it has hitherto been. But in view of the facts as they stand at present, I am inclined to think that in this country we have now had the worst of this insect, and that it will never again be so calamitous to us as it has been. I have heretofore, on different occasions, expressed the opinion that the career of this insect would be analogous to that of its predecessor, the Hessian fly, which, on its first introduction to our shores, gradually overspread the country, everywhere devastating the wheat fields for a number of years, after which it subsided, and has seldom since attracted any particular notice. And it appears to be one of nature's laws that when an insect is newly introduced into a country whose climate and productions are adapted for sustaining it, it immediately multiplies to a surprising extent, and thus usurps a place which does not belong to it in the arrangements of nature, and which it consequently cannot permanently continue to occupy. Asa Fitch.

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[For the Country Gentleman and Cultivator.]

HOW I TREAT MY TURKEYS.

It may be interesting to some novice in turkey raising, to know my experience in that line. Two years ago this spring a neighbor sent me a present of eight turkey eggs, and as I had never raised any before, I looked upon the undertaking as gigantic. However, I gave them over to the care of a common hen, and resolved to find out something about the proper method of rearing them from some book or agricultural paper. In due time six turkeys made their appearance, and I commenced my practice at all hazards. I made a small coop with a tight roof, and in this I confined them nights and rainy days until they were half grown. In fine weather they had the range of a clover field, where they found a plentiful supply of bugs, and I fed them three times a day until four weeks old with corn dough mixed with water, adding to the dough, rainy days, a small sprinkle of black pepper. I also chopped up fine all the onion tops, which they ate greedily. I kept a pair over winter, and through the summer the hen laid 36 eggs, at three different times—from these, part having been broken, I reared 18 fine large turkeys, with the same treatment as above. Last winter I killed and sold all but five hens and two gobblers. I have already collected about 50 eggs, have 40 set, and hope to raise 100 turkeys this season. My turkeys are a very common kind, some entirely white, some quite dark.

Recapitulation.—To insure success in turkey raising, they must be kept perfectly dry while young, have access to plenty of bugs in fine weather, plenty of onion tops, and a little pepper in their feed in damp chilly weather. E. J.
Randolph Co., Ill.

[For the Country Gentleman and Cultivator.]

A CARROTTY EXHORTATION.

Brother farmers, receive a word of exhortation. *Carrots* is the theme. *Carrots* are not difficult to raise. *Carrots* like a rich, loamy, mellow soil, but *carrots* will grow on almost any soil, if it is well manured with fine manure. *Carrots* should be well cultivated—because they are CARROTS, and *carrots* will not grow where weeds are more plenty than *carrots;* therefore keep the ground mellow and the weeds clean from among the *carrots.* *Carrots* should be sown by the 20th of May, though it will *do* to sow *carrots* the first of June, if the soil is well adapted to, and the season favorable for the raising of *carrots.* To get a large crop of *carrots* from a small piece of ground, the rows of *carrots* should be 14 inches apart; but then the *carrots* must be worked out with the hoe. When *carrots* are to be worked out with a horse hoe, the rows of *carrots* should be 30 inches apart. The long *Orange carrot* is about as good a *carrot* to raise, as any other variety of *carrot.* From six to eight hundred bushels of *carrots* can be raised from an acre of ground, without much trouble.

Brother farmers, have faith in *carrots.* *Carrots* can be raised for ten cents a bushel, and *carrots* are worth 18 or 20 cents a bushel to feed to cows, horses and other stock. *Carrots* make very rich milk, and *carrots* improve the quality of the butter, as well as increase the quantity. *Carrots* are very healthy for all animals. *Carrots* are especially good for horses—a portion of *carrots* is undoubtedly better for them than all grain. Hogs love *carrots* if boiled—when prepared in this way, they will winter very well on *carrots.* Poultry are very fond of *carrots,* either raw or cooked—raw *carrots* chopped fine, are excellent for them in the winter.

Brother farmers, let me again exhort you to have faith in *carrots.* Five bushels of *carrots,* (300 lbs.) costing fifty cents, are worth as much to feed to stock, as one hundred pounds of shorts, costing one dollar. Four bushels of *carrots,* (240 lbs.) costing forty cents, are worth a bushel of corn or barley, or two bushels of oats, to feed—the price of the grain being uncertain—that depending upon who is President. Therefore, finally brethren, have faith in *carrots*—fit a piece of ground for *carrots*—sow *carrots*—raise *carrots*—feed *carrots*—and I think you will come to the conclusion that *carrots* are CARROTS, and that *carrots* are profitable to raise and feed. This has been my experience with *carrots.* The meeting is closed.

Jefferson Co., N. Y. J. L. R.

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[For the Country Gentleman and Cultivator.]

CULTURE OF HUNGARIAN MILLET.

Messrs. Editors—Seeing an inquiry in your paper, in regard to the culture of Hungarian Grass, I give you some of my views on the subject. I have raised and fed Hungarian hay ever since its introduction here, and consider it the best of fodder for horses, cattle or sheep.

Like corn, it delights in a rich moist soil; but still it will probably grow on as great a variety of soils as any crop we raise. The ground should be well plowed, and if very rough should be harrowed before sowing, to prevent covering the seed too deep. It may be sowed any time after sowing oats. I prefer not to sow until the ground is warm enough to give it a good start—say soon after corn planting. It should be sown on fresh plowed ground so as to give it the start of the weeds. It is sowed from one to three pecks per acre. I prefer about half a bushel. After it is sowed, it should be well harrowed in, and finished off with a roller or clod crusher, so as to leave a smooth level bottom for cutting. A clod crusher, made as described on page 267 of vol. 15 of the Co. Gent., is a good implement, and one which every farmer should have.

On good soil, three tons is a good average crop. It should be cut as soon as full grown and while the seed is in the milk, unless it is intended for seed, when it should be allowed to become fully ripe. It may be tramped out with horses or threshed in a machine, or small quantities may be threshed with a flail. It will yield about ten bushels of seed per ton of hay. The seed when ground, makes a good food for hogs, but I do not think it is very healthy for horses. W. R. *Nebraska City.*

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[For the Country Gentleman and Cultivator.]

HOW I GROW MY CORN.

Eds. Co. Gent.—I commence with the intention of telling you how I raise corn, but before I tell how, I wish to give my way of managing manures, so that you can get the whole corn story.

I never plow in manures of any kind within one year from the time I spread them on the land. I use all my manures to top-dress with, either in the spring or fall, as suits my convenience.

In some cases I find it is better to draw out farm manure in the spring than in the fall, but in a majority of instances which I have tried, the fall is the better time.

I not only top-dress meadows but pastures—the newly seeded as well as the old. I never plant corn on old land (i. e.) land that has borne a crop of grain or roots the year before.

I take a piece of sod, plow it up and down the hill, with the furrows as straight as possible. Commencing on one side, I measure fifteen or thirty feet from the fence at each end, and in the middle if necessary, stick up my stakes, start my team and turn my first furrow while going up hill, for then the next furrow will lie better upon it than if plowed the reverse, and continue back furrowing until I have plowed out to the fence. Now I measure off the same distance again at each end, and proceed as before, and continue doing the same until I have finished plowing. I never plow head lands unless I am obliged to, or make short furrows in finishing up the lands. When done plowing, I take a roller and go lengthwise of the furrows, which leaves the ground right for the marker. If the land is rather smooth and free from cradle-knolls, I make marks for four rows at one time, but if rough, only three. I mark only one way, and that is *across* the furrows, and plant *between* every third and fourth furrows, *never putting a hill on top and in the middle of the inverted sod, but between them.*

When I commence to hoe I take a corn cultivator and go lengthwise of the furrows the first time, then across them—hoe twice, and I have never failed of getting less than one hundred bushels of ears per acre.

I have tried harrowing the land before marking, many times, but I am satisfied I can raise better and sounder corn—more of it, and get it ripe at least ten days sooner on land not harrowed before planting.

I always plant the eight-rowed yellow variety—save my seed before or at the time of husking—hang it up high and dry, and shell off a little from both ends of the ear and give to the hens or pigs. Byron. *Springwater, N. Y.*

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Messrs. Editors—My wife being much interested in the department of Domestic Economy in the Country Gentleman, and having acquired much information from it, proposes to offer some receipts for that department, for the benefit of others.

Poor Man's Cake.

Take of raised wheat bread dough $2\frac{1}{2}$ teacups—$1\frac{1}{2}$ cups of sugar—a piece of butter the size of a hen's egg. Spice and fruit to suit your taste. (The cake can be made either with or without fruit.) After it is mixed, set it by to rise, and then put it in pans and bake in an oven not quite as hot as for bread.

Soft Gingerbread.

One teacup of molasses, one cup of cream, two eggs, one teaspoonful of ginger, one small teaspoonful of saleratus, and a little salt, with flour enough to make it as stiff as pound cake. C. T. Alvord. *Wilmington, Vt.*

[For the Cultivator and Country Gentleman.]

What Can be Done by a Man Without Means in Two Years.

A few days ago, when returning home from a neighboring village, I found that the waters of an intervening creek had become so swollen during my absence, from the rain and melting snow, that on attempting to ford it on horseback both myself and horse came near drowning, being carried away by masses of descending ice, and lodged against a neighboring fence. After establishing ourselves again on terra firma, and in the same place from whence we started, I was glad, dripping with wet, to accept the hospitalities of a house near by until morning.

During a conversation with the occupant in the evening, I learned some interesting facts concerning his history and farm management, which I record for the benefit of such of your readers as may happen to be poor, and as an inducement for them to "go and do likewise."

Said he: "I came upon this farm (50 acres) two years ago next May, and at that time all the property I had in the world was one horse—not a plow, drag, wagon, sleigh, harness, or anything else except my one horse. Indeed, had the man of whom I rented the farm known my condition he would have passed me by for a better tenant.

I went to a man who was extensively engaged in the lumber business, told him my story, and asked him to sell me a horse on time. He sold me the horse, and I gave him security on the horse for his pay.

I went to a harnessmaker for a set of harness on time, offering to give security on the horse I formerly owned, and on the harness itself, but he not liking to sell a harness on these terms, I again applied to the man who had sold me the horse, offering him the same security, which he accepted, and got me the harness.

I also told him that I must have some seed barley. He let me have forty bushels, agreeing to take security upon my share of the barley (one-half,) upon the ground. He would not accept the security, however, after the barley was sown; but in the fall, upon settlement, charged me five shillings per bushel and interest for the seed barley, and took barley of me at eighty cents per bushel for pay. From the seed sown I harvested over five hundred bushels of barley, which I sold at eighty cents per bushel; and this, with other grain which I managed to procure and sow, left me at the end of the year very well satisfied with the fruits of my labor.

In the fall I attended an auction sale and bid off forty very fine ewes. The man supposing I was another individual of the same name, did not ask me for an endorser, so I gave him my note at one year. In a few days, however, he ascertained the mistake, and came to see me. I satisfied him by giving security on the sheep, and stipulating that the proceeds of the wool and lambs should be applied on the debt. Giving the sheep good care through the winter, I paid the debt with the wool and lambs, and had ten ewe lambs left beside; so that I have now a choice flock of fifty sheep, worth at least $200. During the last summer I kept my sheep on four acres of clover grass, and fed them clover hay, well cured, beside, through the entire summer, and I never saw sheep do better.

Last fall I fattened thirteen hogs; the lightest weighed 250 pounds, and the heaviest 350.

Now, I have been figuring up how much I have cleared in less than two years; after deducting expenses and paying one half of the products for rent, and placing the personal property at a low estimate, I find I have cleared full $1,200.

A few weeks ago I took a trip to the West, and purchased a farm of 160 acres a short distance from the village of St. Johns, Mich., making payment quite a number of years in advance. Before leaving for home, I was offered $800 for my bargain, but refused. In the spring I shall sell out my grain on the ground, take my sheep, team, wagon, and other movables, and depart for my new home.

I must confess I was deeply interested in this statement, every word of which I knew was true. In the morning he took me to see his stock, and a finer, more thrifty flock of sheep I have seldom seen, while the remainder of his stock exhibited the same evidence of their owner's care. K. *Wilson, N. Y.*, 1861.

[For the Country Gentleman and Cultivator.]

Right or Left-hand Plows---A Plow Shoe.

As it is now time to begin to plow for corn, let me make a suggestion. Many of our best farmers advocate "left-hand plows, and tell every one they meet that *they* are the only plow that a man can do the *right kind of work with.* Why? They tell you that as you have your near horse in the furrow, you have so much better control of the team that you can do better work. Now the way I look at it, there is no difference in the right or left-hand plows, if they are of the same quality. Throughout the west the farmers use a single line and jockey stick, putting the line on the horse. Now having the line on the near horse, to have him in the furrow, of course we must have a left-hand plow. But if you have none, try your line on your off horse, using your jockey stick to jockey your near horse off to the place you want him, and I think in two hours time you will say, that there is no advantage in a left-hand plow.

Do not run plows about from field to field, without a shoe; you soon wear the bar of your share out on stones and hard roads. I give you a rough sketch of mine. I got a crooked stick, dressed it up as smooth as I could, put in a standard that passes up through the plow behind the mold-board, and made a notch in front that would just receive the point of the plow; in this way I can move my plows over any kind of roads without their coming in contact with stone, or anything of the kind. J. H. Hunt.

PERENNIAL TREE CABBAGE.

We republish the following paragraph, copied from a California paper some months since, for the purpose of attaching to it the annexed letter, just received from Dr. Hepburn:

Vegetable Curiosity.—There is now growing in Dr. Hepburn's garden, Mokelumne Hill, California, a cabbage tree which, for five years, from an ordinary cabbage plant, has grown to be some nine feet high in the main stock, and when its full branches were on, a month ago, near fifteen feet high. The stalk has become hard as wood, and it bore this year about fifty or sixty heads of cabbage. The Doctor intends to keep it growing, and thinks that in a few years more he will be able to boast the possession of the most profitable tree in the country; for besides great quantities of green cabbage and krout that it produces, he gathers many papers of seed, and hundreds of plants that spring up spontaneously beneath its boughs.—*St. Andreas Independent.*

Mokelumne Hill, Calaveras Co., Cal., March 27, 1861.

Eds. Co. Gent.—In one of the nos. of the Co. Gent. I saw a notice of my cabbage tree. I enclose you some of the seed which grew on it last summer. This is the sixth crop of seed it has borne. It is now beginning to blossom again. It also bears every year a great many heads, say 40 or 50; but on account of the weight, they are taken off when small, else the branches would break and split from the main stalk. It is an evergreen, and appears to grow the whole year. What the seed may do in your climate I do not know; but here we raise cabbages from it every year. James Hepburn.

This plant will not, of course, endure the severity of our winters. We will, however, have it tested both in the green-house and in the open air.

Good Yield of Clover Seed.—An Ohio paper says that "Mr. Weldy of Atwater, cut this last harvest three tons of clover from three-fourths of an acre of ground, from which he has just threshed five bushels of splendid clover seed." We should like to know whether this was the second growth or cutting or the first. In any case it is a large yield.

IMPROVEMENT OF PASTURES.

In the "grain and stock" farming of the larger portion of the northern and middle States, a difficulty is occasionally experienced from the prevalence of seasons unfavorable to grass—this product being insufficient for the summer supply of stock—and causing, if nothing more serious, a falling off in the growth or produce of the flocks and herds of the farmer. The same causes also lessen the supply of winter forage, and this, with the reduced condition of the animals, entails further decrease in value. A partial remedy is found in the usual practice of reducing the number of animals, but it is not a profitable time to sell when every one is forcing an over supply of an inferior article upon a dull market. And it may be that another season will prove for favorable pasturage, which will then be lost for want of stock to consume it. It may bring high prices for that then in short supply—beef, mutton, wool, dairy products, &c.,—but very little to the advantage of the farmer.

These thoughts, or something like them, will occasionally force themselves upon those engaged in grain and stock-growing, and it is our present purpose to offer a few hints on the improvement of pastures—of the means best calculated to render them productive and reliable, whatever the season may be, unless very much out of the usual course of nature.

The best security against the effects of drouth is found in a deep and porous soil—one able to hold a large quantity of "water of absorbtion," and furnishing ready passage for the "water of drainage," so that it will retain its moist and mellow state much longer than a hard or undrained soil. The effect of drouth is first apparent on the hardest and least fertile soils, and such suffer most from redundant moisture, because it must pass off very slowly by evaporation, which has a further tendency to bake and harden the soil. The first provision should be better drainage; next, if cultivated at all, deeper cultivation, and last, every available appliance in the way of enriching the soil. On a fertile soil grass starts early, its roots are stronger and run deeper and hence are less affected by dry weather than that of a weaker and later growth. Over cropped pastures are also slower in starting and have less power to withstand the lack of rain, and hence are less reliable at all seasons.

The most marked improvement in the product of grass we have ever observed, has been effected by manure applied in autumn, and this, in connection with irrigation in spring and early summer, has worked wonders on pasture lands where both may be applied. Under the head of manure we may class not only the contents of the barnyard, but lime, plaster, bone-dust, ashes, guano, etc.; these latter, not, however, like the first, of universal application, but suited to the wants of particular soils. Upon clover, plaster or gypsum produces an excellent effect, and on soils suited to this crop, and not too far impoverished, it is a cheap and efficient means of improvement.

A better growth of grass will enable the farmer to keep more stock, and thus produce more manure, but only to a certain point are stock profitable. Too great a number will "eat the grass before it grows," or so early and so close as to prevent its growth, and thus spoil more than they enrich. It may be set down as a rule that a grain farm should winter more stock than it summers—making up the lack of forage by feeding freely of grain, and it will be found that such farms improve far more rapidly. The reason is very simple. Grain-fed stock produce more and better manure, its value is at least double that made from corn fodder alone, and will produce a quicker and more telling effect wherever it may be applied.

Let the experiment then be tried by all—on a small scale, if no more, by the incredulous—that all may be satisfied of the result. Manure should be composted for surface application, to give fineness, to destroy the seeds which it contains, and to render it readily soluble, that it may take immediate effect. Top-dress a meadow or pasture early in autumn, spreading the manure as even as possible. Top-dress the winter wheat which is to be seeded to grass now and clover in the spring, not only for the benefit of the wheat, but for that of the ensuing crop. If grass seed has been sown with spring grain, this too will be materially benefited by an early dressing of manure—will better withstand the winter, and produce a far heavier first crop.

We venture to predict that the farmer who thoroughly tries these experiments, will soon apply a larger share of his manure in this way. He will not feel the lack of manure to plow under for his corn crop when a thick, heavy sward supplies its place, nor observe any failure in the ensuing spring crop when that sward again comes to the surface; and his surface manured wheat will prepare the soil for more clover, to be again manured, if necessary, to further enrich the soil. Plaster will, of course, be employed, and in a few years he will very likely find that a dressing of lime will largely increase the product of his soil, and it will be accordingly applied.

If these views are correct, then the improvement of grass land lies at the foundation of better farming and more certain results in all its operations. The details in every case can scarcely be pointed out, but with the general principle in view to employ every available method to grow good grass crops, and keep better stock, the farmer can pursue his own methods, assured that experience and observation will bring wisdom here as elsewhere.

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[For the Country Gentleman and Cultivator.]

FATTENING SPRING PIGS.

Eds. Co. Gent.—It has long been my practice to fatten spring pigs to furnish pork for family use, and I have generally been quite successful in so doing. As a sample I send you the experience of last year.

June 5th, I bought two pigs—Leicester and Suffolk cross—weighing 18 lbs. each. I put them in a tight pen and kept them there until butchered, on the 4th of Dec. They had the dairy swill of one cow, with the addition of a little corn meal and wheat bran; and after potatoes were fit to dig, the small ones from my little patch, boiled and mashed with their swill. Toward the last I bought a few bushels of ears of corn, which was boiled on the cob, and fed in addition to the milk, meal and bran mentioned above, which, I may observe, was so thin that the pigs could drink the most of it. The amount in dollars and cents stands as follows:

Fat Spring Pigs. Dr.	
To cost of pigs	$2.38
Meal and bran	7.80
Small potatoes	50
Corn in the ear	2.25
Total expense	$12.93
Pork. Cr.	
By 412 pounds of pork at $6.50 per cwt	$26.78
Deduct expenses	12.93
Profit	$13.85

In the above the lard from the intestines is not included, nor the soap-making material. It will be seen that the pigs gained a fraction over one pound each per day, during the six months I fed them. J. Sibley.

[For the Country Gentleman and Cultivator.]

CHESTER COUNTY PIGS.

An Illinois subscriber in the last number of Country Gentleman, makes inquiry of those acquainted with Chester county breed of pigs, what would be thought of a cross between a full blood Suffolk boar, and "the largest sows of the neighborhood," and whether this would not make "good Chesters?"

Whether such a cross would result in good animals at all, depends very much on the character of these "largest sows." One thing is very certain, they would *not* make "good Chesters."

The Chester county breed of hogs may now be fairly considered *a distinct breed*, having certain well defined peculiarities of form, color, hair, habit and constitution, which in selections among the best families, are pretty sure to be continued down in their offspring. This is evidence always of a distinct breed. With mongrels or crosses, where peculiarities have not been *long established*, and may be considered *accidental*, the progeny is uncertain in character. Some years ago I purchased a farm near West Chester, Chester county, formerly owned by Capt. James Jeffries, who erected the buildings and resided on it for a time. In one of his voyages between Liverpool and Philadelphia, he brought home a pair of Bedfordshire hogs, which are generally considered to be the origin of what is now called the Chester county breed. By careful and judicious crossing, with our best native stock of the county, *continued* for a period of now 25 or 30 years, their peculiar excellencies and differences from all other breeds may be said to be fully *confirmed and established*. These are—pure white color, thin skin, *length and depth* of carcass, small head and other offal parts, width and depth over the shoulders, disposition to fatten at any age, and to attain *great size*. For food consumed, they are believed to return weight equal to any other breed. They are also well larded inside, making them emphatically the farmer's hog, and are also kind and docile in temper, making excellent nurses.

Several were killed last fall weighing 700 to 800 lbs., and they have reached over 900 lbs., making a pound of meat per day till they were killed. I have sent them to nearly every State in the Union, and in no case yet have had the least complaint of want of entire satisfaction.

Great care is, however, required in the selections, and I have had to advise some of my correspondents, that pigs from Chester county are by no means always "Chester county pigs," there being probably as many mongrels or mixtures in Chester county as elsewhere.

This *fondness for crossing*, recommended by "Experience" on page 204, in present volume, is a *strange* and most *injurious* habit with many of our farmers. Injudicious crossing has seriously injured the general character of American stock of all kinds. Instead of being satisfied with what has been accomplished already in distinct breeds, the wish seems to be to have something *better*. In England this curious propensity is almost unknown or confined to a very few, who by the aid of *abundant capital, quick perception of good points, combined with extraordinary skill and judgment*, in a long course of years have succeeded, either in originating a distinct breed of animals or *adding* to and *confirming* new points in an old and well known breed. Colling accomplished the first with the Durhams; Bakewell, Ellman, and now Webb, have done the same with sheep.

In this country the first thought with a farmer on obtaining a fine animal is, what a fine opportunity to make a cross, which too often he injudiciously attempts, and loses by the operation the benefit of 25 years of skillful effort. In England breeds are kept *pure*, and selected with reference to the requirements of the farmer, his soil, climate and business. It should be the case here.

In a breed of swine so nearly right as the Chesters, it is easy to see how much might be lost by crossing, but difficult to understand what is to be gained. Durhams, Devons, Alderneys, Herefords, among cattle, South-Downs, Bakewells, Broad Tails, and others among sheep; Essex, Berkshire, Suffolks, Chesters among swine, have all their fixed points of character. It is utterly impossible to combine all these in *one animal*. The superiority of any one breed consists in having *more* of the desired points than another. To have them *all*, would seem to come up to the standard of the Yankee clock, which was recommended, not only to give any hour of the *day* or *night*, to show on the dial the revolutions of all the planets, signs of the zodiac, predict changes of weather, &c., but would also on an emergency, give *six quarts of milk*.

Philadelphia. PASCHALL MORRIS.

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[For the Country Gentleman and Cultivator.]

RUTA BAGA or SWEDISH TURNEP.

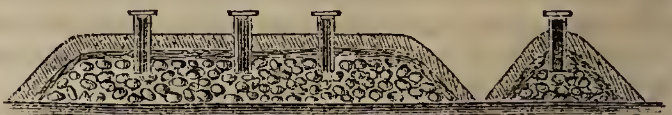
Practical Directions for the Cultivation, Storage, and Feeding-out of Ruta Bagas or Swedish Turnips.

By John Ratcliffe Chapman, C. E.

Difficile est proprie communia dicere.—Hor.

Turnips can be buried in pits or graves in the following manner, and they will come out in the spring as bright and handsome and sound as when they were dug up in the fall. Place the graves on the highest knolls, and avoid digging holes below the surface of the soil—form them in long piles, something in the shape of a common barn roof, by placing the turnips about three and a half feet high, and the sides at an angle of repose, formed by placing them truly, so that they will not roll down. A heap containing from 120 to 150 bushels, is about the proper size. As soon as the turnips have been placed in proper shape, cover them with straw, and the more straw the better. It ought to be drawn out as if going to be used for thatch, and then laid with the stalks of the straw pointing upwards. As soon as the straw is on, cover the grave with soil dug up all around it, and take care to tread the soil down tight and firm as fast as the work proceeds. This covering of earth ought to be from 10 to 12 inches in thickness in Central New-York. Before you finally close up the earth at the top of the heap, put in three ventilators at regular distances apart.

Ventilation is the key to the proper preservation of all roots buried up in graves during winter. I make these ventilators by taking four pieces of one inch bass-wood, two of them two inches wide, and two of them four inches wide; nail them up together so as to make a pipe with a bore of two inches square and about three feet long. Leave the ends of the two inch pieces half an inch lower than the four inch pieces at the top end, and then nail on *securely* a cap of *sound* board, six inches square. This will keep out all rain, &c., and yet allow the heat generated by the turnips when first buried to escape. Turnips are of a much warmer nature than potatoes or carrots, and require to be well ventilated, *or they will all rot.* Now it is evident that if the ventilators are left open during our Siberian winters, the turnips will be frozen, and subsequently rot. To guard against this, about the middle of December stop up the open sides of the ventilators at the top end, under the cap, with cotton batting pressed in tight.



Pit—Longitudinal Section. Cross Section.

Turnips treated as above directed, will come out clean and beautiful in the spring, and they will in a few years constitute an indispensable article of food for farm stock. Before they can be fed to sheep or cattle, they must be cleaned, either by scraping or washing, and then cut into thin pieces by means of a turnip slicer, which can be procured of any of our agricultural implement makers. The knives put in these machines for cross cutting soon rust out, and when that happens I cut the turnips twice, which makes them fine enough. Where turnips are *very large and hard*, I think it best to cut them up with a sharp spade into four or six pieces before putting them into the slicer.

Turnips are most excellent feed for sheep, (store or fat,) young store cattle—for fattening cattle, or feed for cows, when their milk is not used for dairying purposes. Horses are very fond of them, and when fed sparingly are very useful.

I have found Skirving's Improved Purple Top Ruta Baga, for field culture, to be the best variety to stand the changeful seasons of this climate. The French White and Aberdeen Yellow *will rot badly* on a strong soil in a wet season, such as last summer and fall, while Skirving's will be sound, but not so large as in a favorable season, such as 1859.

There is no trouble in producing from 800 to 1000 bushels of turnips per acre, when managed in the manner above described, and at a cost of less than six cents per bushel. In fact they are much the cheapest stock food that can be raised on a farm, and if the climate would allow them to be fed off by sheep in the fields where grown, they would add a source of wealth to our farmers which is incalculable.

The opinion entertained by some, that the simple "grow turnips," "grow turnips," "grow turnips," (enunciated, if I remember right, by the great Daniel Webster,) will enrich the land on which they are grown, *is erroneous.* All green crops ought to be consumed by sheep on the spot where they are grown. The excrement and urine dropped and trodden into the soil, make it much richer than any other course that can be pursued with the same amount of green produce. In fact, the turnip crop is the foundation course to British agriculture, aided and stimulated, however, by a mild, moist climate, and a longer season for growth and ripening.

After casting about my thoughts for many years on the subject of a key course for American farming, I have come to the conclusion that the red clover is *the green crop*, and enough stock to convert *all the produce* of the farm into manure, with the exception of the bulk of the grain which must be sold, for farmers in New-York State cannot afford to convert the grain into beef, and hardly into mutton or pork, at such low prices as the markets have been ruling this winter.

There are some farms that would be enriched and their owners ultimately benefitted, (if they could afford to live through it,) *if all the products of the land* were fed to stock on the farm for the purpose of obtaining manure, even if the grain, when converted into meat, left a loss of 20 per cent. *It takes an age to enrich poor soils with poor manure.* A man dies or becomes discouraged before such lands *get a head of steam on.* It is certain that the remunerative grain growing power of a great deal of land in this State, is very nearly exhausted. The humus has gone to market, and there is nothing left but a lifeless mass of clay and sand, as sad as unleavened bread.

Oneida Lake, Madison Co., April 2d, 1861.

How to Prevent Sheep Shedding their Wool.

Messrs. Editors—I frequently see articles in agricultural papers in regard to sheep shedding their wool. My attention was again attracted to it by an inquiry published in the Co. Gent. of 4th inst., from "E. P.," Downington, Pa. He adds that he has understood oats would cause the loss of wool, but he had fed none, and hence that could not be the reason of his sheep losing their wool.

My impression is that it is for the *want* of oats rather than its *use*, that causes the difficulty, although I never fed much of it. Corn is our staple crop for feeding everything, and my remedy for all diseases of stock, such as "horn ail" in cattle, sheep losing their wool, &c., is corn. I rarely have any trouble with my stock in that way as long as the corn-crib holds out.

My sheep are Cotswolds, and they have never lost their wool, except two ewes one season that were sucking. By neglect they had got rather thin late in the fall, both being old, and came into winter quarters quite poor. It was then too late to remedy the difficulty. You must not suffer your sheep to get poor in the fall if you would have a good clip of wool and good lambs. In October, when the pasture begins to get poor, as it frequently does, I commence feeding very little corn, and continue it through the winter, and until the grass is ample for their support in the spring. During the winter, and especially the latter part, I add turnips to their feed, and just before weaning time I sprinkle upon the turnips about a gill of oil-meal to each ewe, which, of course, are now separated at this season of the year from the other sheep. The extra feed the sheep eat amounts to but a trifle; while the increase of wool and general thrift of the flock is very considerable, saying nothing about the additional number of fine healthy lambs.

"E. P." also inquires "what is the best feed to insure a great flow of milk?" This is answered, I trust, sufficiently above. More than half of my ewes always have twins, and *raise them too*, and the lambs get abundance to "eat, and grow fat." If the mother is fat, the lamb will not be poor. That is my experience, at least, among Cotswolds, and all breeders of that class of sheep, I am quite sure, will verify the same. I know but little practically, of other breeds, having always bred the long wools, as they are termed, but doubt not the rule will hold good in all cases. I. D. G. Nelson.

Elm Park, near Fort Wayne, Ind.

POST AND RAIL FENCES.

The increasing scarcity of fencing material has led to various economical devices and improvements on the old heavy zig-zag fences, and we notice a new one proposed by a correspondent of the *Homestead.* It is to attach the rails of our old worm fences to posts like boards, thus making a fence as durable as boards, and requiring only half the number of posts usually needed. The posts should be set firmly, at least two and a half feet deep, and butt end up, and with the widest side of the posts in the direction that the fence runs, as tending to prevent heaving, and to resist side pressure.

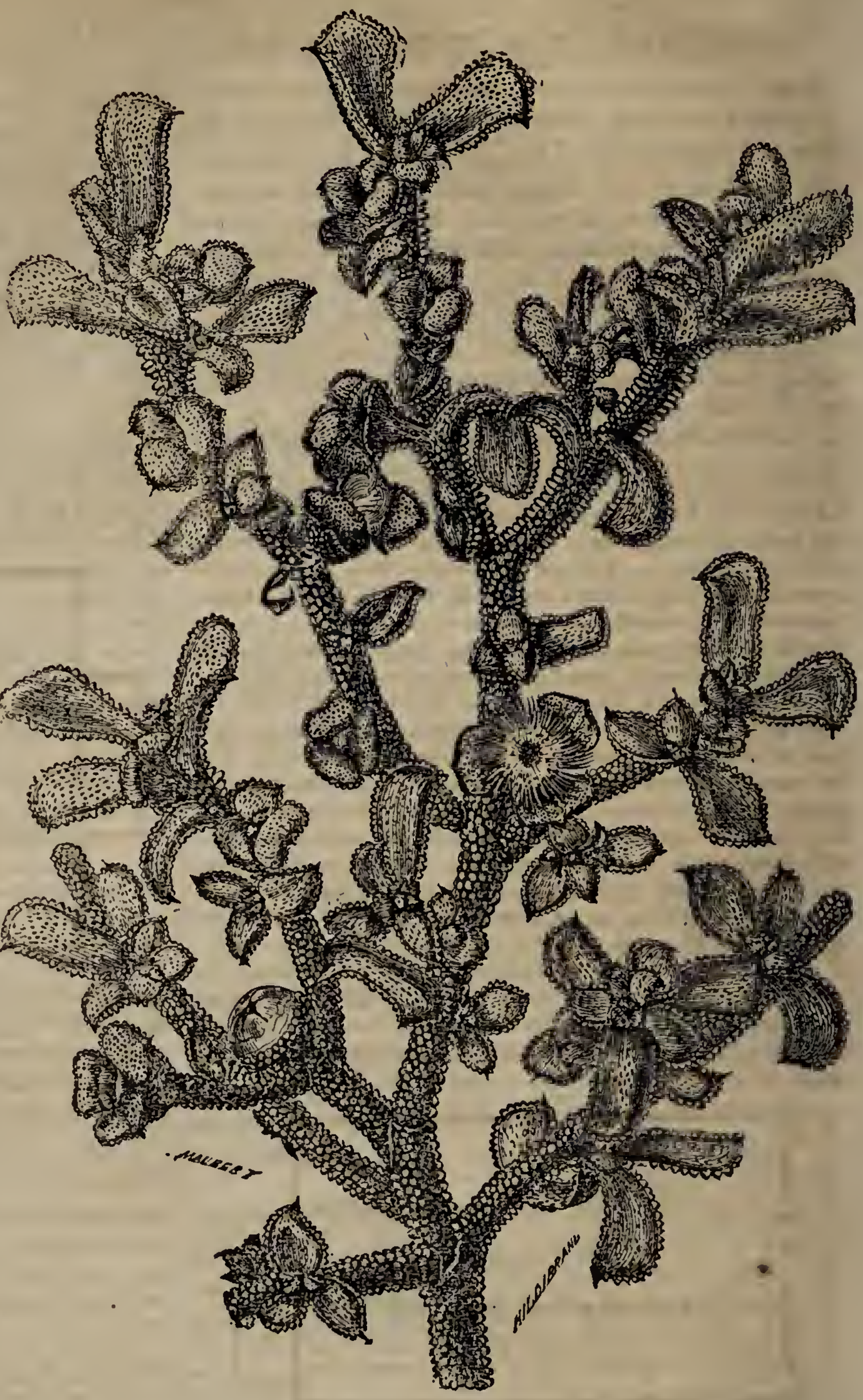
"A ridge of earth, a foot or eighteen inches high, running the whole length of the fence, and directly under it, will save one rail each length. This ridge may be easily made by first turning two furrows together with a plow, and then laying other furrow slices (grass side up) on top of the first two. The rails may be attached to the posts with spikes of proper size and length. Three rails over the ridge of earth, attached to the sides of the posts, and another spiked on to the tops of the posts, will usually make a fence sufficiently high and substantial. Where there is a scarcity of rails, a strand of fence-wire may be used in lieu of the top rail, or a long pole is perhaps better, of sufficient size to be split into halves and spiked on to the tops of the posts."

* * *

Time of Sowing Timothy.—A writer on this subject in the Ohio Farmer, would sow either very early in the spring, or as late as October in the fall, to escape the effect of dry weather occurring before the plants come up, or while they are very small. He gives an account of two pieces sown last year, one after wheat, the ground being plowed the middle of August, and harrowed and sowed to timothy seed the 1st of September, after a smart shower. The other was corn ground, harrowed between the shocks of corn the 1st of October and sown immediately. It came up, and could be seen forty rods distance before winter. The first sown showed no signs of growth, and was again harrowed and re-sown the middle of October, and has since done well. Land for spring sowing, he thinks should be fitted in the fall, then by sowing early, the frosts will bury the seed in the best manner.

THE ICE PLANT.

(Mesembryanthemum crystallinum.)



This plant, of which we give an engraving herewith, has herbaceous, cylindrical stems, attaining sometimes the length of a yard, and the size of the little finger, spreading or nearly recumbent, branchy, greenish, and sprinkled over with crystalline vesicles. These stems bear large leaves, especially the lower ones, oval, very wavy, alternate or opposite, of a glaucous green, often slightly purpled toward the tip, tender and succulent—their whole surface covered with vesicles like those of the stem, but smaller. The flowers are lateral, and almost sessile; the calyx has five divisions; the corolla of medium size, has numerous petals, very narrow, white, often slightly tinged with purple at the tip. The fruit is a rotund capsule, with five cells, enclosing numerous small rounded seeds.

This plant grows at the Cape of Good Hope and in the Canary Islands, whence it has been introduced into Greece, and the rest of southern Europe.

The Ice Plant is an annual or biennial; its flowers bloom in July and August.

The crystalline and brilliant vesicles with which all the plant is loaded, render it one of the most singular and curious of known vegetable productions; regarded as extravasations of sap under the epidermis, classed by Auguste St. Hilarie among the *papules* or superficial glands, they are often very large and protuberant, especially in hot weather, and then resemble particles of ice, or brilliant crystals. This characteristic is also found, but in a less degree, in some proximate species.

The Ice plant is propagated from the seed, sown in the bed or under sash in April or May, in pans of mould—the plants put out while small in a warm exposure in the open air. In the south, where it naturally reproduces itself, it is better to sow the plant where it is intended to grow, covering the seed very lightly. It is also propagated from cuttings of the branches, which should be allowed to wilt somewhat in the air before they are planted.

This plant fears excessive moisture, which, particularly in winter, soon destroys it. In the climate of Paris it must be protected from the cold during this season, in a house of moderate warmth, where it can only be kept in pots well drained, filled with fresh earth, rather poor than rich, and mixed with a little compost.

The Ice plant is sometimes employed in medicine as a diuretic. In Egypt soda is extracted from it, and it has even been advised to sow it for this purpose in the sandy districts of France, which, however, possesses indigenous plants much better adapted for that object. The French, who like to avail themselves of everything that can decorate the table, also employ it to garnish certain dishes, and the drooping branches can be made to ornament a basket or dish of fruit very beautifully.—*Translated and condensed for the* Country Gentleman *from the Revue Horticole.*

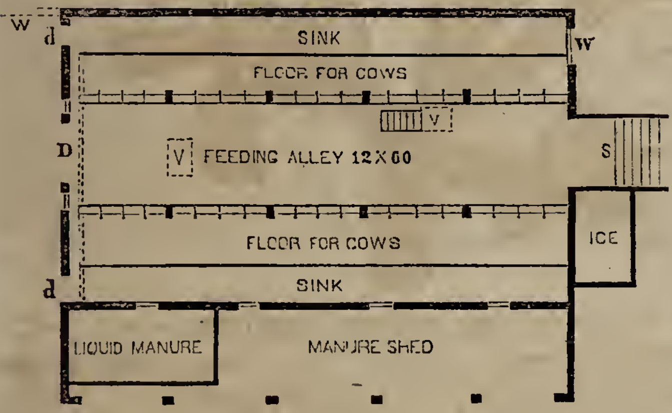
Death of M. T. Goldsborough.—The American Farmer announces the sudden death of this estimable gentleman, of congestion of the brain, at his residence near Easton, Md., on the 10th of March. "Mr. Goldsborough was well known within and beyond the limits of the State, as one of our most intelligent, and at the same time practical and successful farmers. As President of the Talbot County Agricultural Society and Vice-President of the State Society, he has been for many years prominently connected with the various measures pertaining to the improvement of our agriculture."

Destroying Purslane.—The Prairie Farmer, after stating that purslane "will not grow after having been digested by a hog," says that Prof. Turner has a sort of toothed scoop with plow handles attached, with which he passes between his nursery rows and takes out the purslane which the hoe and cultivator has left there, and carries it off easily and rapidly, for the food of swine. The teeth of this instrument are made of iron rods about three-fourths of an inch in diameter, and half a dozen in number.

[For the Country Gentleman and Cultivator.]

DAIRY BARN FOR 30 TO 40 COWS.

I saw an inquiry in your paper some time ago, for a plan for a barn that would hold stuff enough to keep 30 cows and stable them. I thought I would give a description of mine, which I think is quite convenient, and will stable 40 if needed, and will hold fodder enough for 30. It is 60 feet long, 34 wide over the stable, with a leanto on the north side 12 feet wide, making the floor 46 ft. long and 12 wide; bays 24 by 46, on each side of the floor. The leanto forms a shed for the manure, which I wheel from one side of the stable. I have but 4 bents, one on each side of the floor, and at the ends. In the center of the bays under the plate, is a post with 3 girts running each way to the bents; next to the leanto merely a post under the plate, and in the perline plates is a tie in the center over each bay. My posts are 16 feet, but if I was to build over again, I would have them 18 or 20; it would make but very little difference in the cost, and if the room was wanted it would be very convenient; and I think I should do away with the big beams, by letting my perline posts run to the sill, and frame from them to the outside posts. I have a window over the doors of 24 lights; I have a door 8 feet wide, and a 12 lighted window on each side, and a 9 light window in the peak of each end, and my barn is always light all through. The ventilators and shoots for hay, extend from the stables in the basement to the ridge, and are made with four poles hewn on two sides, and furnished with ladder-rounds on two sides, and slats on the other two. Every other slat can be taken out, so as to pitch hay from any point high or low, directly into the stable. They ventilate the stables, and in cold weather need closing to keep the stables warm, regulating the opening according to the temperature. The poles forming this shoot are fastened to the rafters and to the perline tie. It is smaller at the top, so that the hay will not lodge on its way down.



BASEMENT AND STABLES.

S. Stairs toward house, under granary.
D. Door, 8 feet wide, with 12 lighted window on each side.
d. d. Doors for cows to enter.
W. Wall to hold the bank.
v. v. Plan of ventilators above.
w. Window.

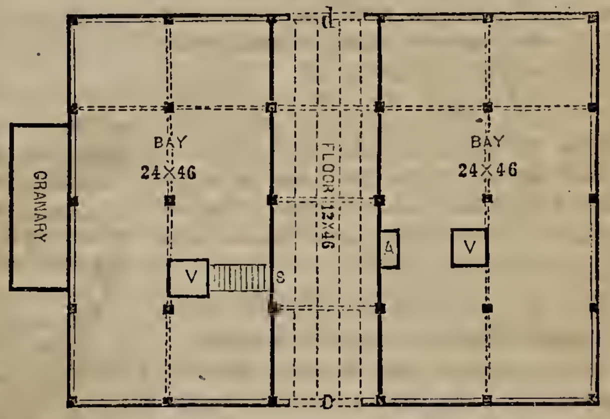
The floor on which the cows stand is raised 4 inches higher than the sink behind them, and is made by laying two tier of stone in water lime and filling up even with the top. The floor they stand on slants 2 inches from the stanchions, which are 5½ feet from the sink behind. The floor of the south stables falls one foot from west to east, giving drainage. The double dotted lines are the drain, falling six inches from the south stables to the tank. The north stables fall 18 inches from west to east.

The liquid manure tank, 12 by 18 feet, is covered with plank on sleepers.

The manure is thrown out of the north stables through the windows, and wheeled out from the south ones.

My stables are 34 feet from outside to outside of walls, 60 feet long; wall on one end, the other end is mostly taken up with doors and windows. I have a door at each corner to let my cows in; a door in the center 8 feet wide, so that I can run a wagon in if I choose, which I find convenient sometimes.

On each side of said door is a window, 12 lights, with a 12 lighted one in the west end; and four 10 lighted on the north side, makes the stable always light. My floor is a cement of water lime and gravel all through; it has been used two winters, and seems to stand well. I am frequently asked if my cows do not get sore standing on such a floor, but I have not discovered any inconvenience whatever and find many things very convenient; my stable is always free from any bad odor, and if any grain is on straw or in chaff, the cows can always get it; this floor is easily kept clean, and every thing saved. The posts under the cross sills being 12 feet apart, gives room for four cows between them, three feet from center to center being enough for large cows, and less will do for small ones. I am aware that some think that cattle will not do as well in stanchions as if tied in a stall, but I cannot agree with them. I have been among cows a great deal, and as far as I have noticed they have done as well when in stanchions as in any other way. As for convenience, they are much the best; you let your cattle all in at one door for one stable, and with a little pains you can learn them to go to the same place every time; they are all together to feed, milk or to look after. They keep one another warm, and seem to enjoy it, and if the stable is tight in cold weather, you can keep it warm, and in warm weather open the ventilator. I find that cattle eat less and do a great deal better in a warm stable in cold weather. I only want them out long enough to drink, and not go far for that.



PLAN OF PRINCIPAL FLOOR.

The dotted lines represent the timbers.
V. V. Ventilators, and shoots for throwing down hay.
S. Stairs to basement.
A. Side door, to pitch from floor to basement.
D. Front door; over it a window of 24 lights, two lights high.
d. Back door, with similar window.

The small squares show where the posts stand, both below and above the principal floor; those on the walls standing above, and those within, in the stables below, forming the line of the stanchions.

Richfield, Otsego Co., N. Y. A YOUNG FARMER.

This is a very convenient and well arranged barn for cattle, but we would suggest an improvement in the stables by making feeding alleys where the "sinks" now are, placing the cows' heads next these alleys, and making the hay shoots next to the side walls. This will cause all the manure, litter, &c., to be thrown into the central alley, and by providing a door at each end of this alley, a cart may pass through daily or weekly and cart off the manure to the fields or to the compost heap. Thirty cows will furnish a good load or more of manure daily, and wheeling and shovelling it daily amounts to considerable labor in a year. The vent'lators on each side follow up the roof next to the shingles, and open at the peak.

The bays are rather too wide for convenient filling, without considerable labor in horizontal pitching, which cannot be well avoided in a barn of this length. If shorter, the bays would be narrower; if 80 feet long, two parallel floors 12 feet wide might extend across the barn, leaving a bay 16 feet wide at each end, and one 24 feet wide in the middle, and filled from both sides. This would require very little horizontal pitching. Eds.

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A Fine Colt.—I have a colt which stood, at nine months old, 14½ hands high, and measured around the arm 19 inches. He is in excellent proportions throughout. Sired by Bay State—grand sire, Green Mountain of Vt. Dam bred in Kentucky. C. G. Taylor. *Rock Island Co., Ill.*

[For the Country Gentleman and Cultivator.]

ON RAISING POTATOES.

As the time for planting is near at hand, I think it would be well to say something through your most excellent paper in regard to raising that almost indispensable article of farm produce, called potatoes. If a family are without potatoes, they hardly know how to get a meal of victuals. They might almost as well be without bread. Now it seems to be the general opinion among the people of our country, that any one and every one can raise potatoes, planted on any soil or any time between the 1st of May and the 1st of July, and harvest or gather them any time between the 1st of October and the 1st of December. Now those very men who plant their potatoes in June and dig them in November, are the first to complain of that dreadful disease the potato rot. They tell you their potatoes are rotting badly, and they don't know why they should—they always leave them in the ground until cold weather, to prevent their rotting—they fear they will lose their entire crop, &c.

I admit that any one can raise potatoes if he knows how; but when I see a potato patch here and there, remaining in the cold, wet and partially frozen ground, through all our heavy fall rains, perhaps till the 15th or 20th of November, then I am of the opinion that there might be good farmers who don't know how to raise potatoes. Again many kinds of potatoes, if planted very late, will not get ripe before frost comes and kills the vines, which I assign as a good reason for their rotting. It is my opinion from the best of my knowledge and experience in raising potatoes, that full three-fourths of all the losses in our country on the potato crop, are more owing to bad management than any other cause. I have known farmers, or men who call themselves so, sort out their smallest potatoes, perhaps two or three kinds together, from the size of a walnut to that of a butternut, and strew them along in the furrow about one foot apart, without cutting; and I have never known them to fail of raising a very small crop of very small potatoes. One of these small potato-growers a few years since, took a farm to work on shares for three or four years—one of the best farms in Jefferson county—he raised a few very small potatoes, scarcely enough for the family's use, and of very poor quality at that. He finally came to the conclusion before he left, that the farm would not produce good potatoes.

Previous to this time, the owner of this same farm had lived on it some thirty years or more, and never failed of raising a good crop of potatoes. I have raised potatoes every year for the last twenty-eight years, and have never failed of raising a fair crop, and seldom lose any by rotting. I will now give my plan for raising potatoes.

I take, for instance, a piece of stubble ground that was manured last year and plowed last fall, and as soon as the ground is dry enough in the spring I plow again, and if the land is wet I ridge in lands about twelve feet wide, always plowing the same way, so that the water will run off in the dead furrows. I then harrow well lengthwise of the furrows—then with a light plow, furrow the ground three feet apart—then take good large potatoes and cut them so as to leave one eye in every piece—then drop two pieces in a hill two feet apart in the furrow—then cover with a hoe.

For the last six years I have raised a white seedling, a very excellent potato and a good yielder. The tops of this kind are very small—therefore will do to plant nearer than many other kinds. Potatoes should never be planted two years in succession on the same ground. I would recommend changing seed as often as once in two or three years. I would also recommend planting each kind of potato separate—never plant different kinds together.

Watertown, N. Y. D. P.

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☞ R. N. Brown, Esq., Superintendent of the "Buffalo and Erie Railroad," will accept our thanks for time-able of trains for the season opening April 15.

[For the Country Gentleman and Cultivator.]

JOHNSTON'S IMPROVED CULTIVATOR.

Messrs. Editors—As the time for cultivating corn is near at hand, I want your readers to bear in mind that I think I got a great improvement made in cultivator teeth last year, by Messrs. Remington, Markham & Co. of Ilion, N. Y. They do the best work in cultivating corn and potatoes, on all stiff soils, I have ever seen; in fact they are invaluable, and I would advise farmers to try them; and if they are not fully satisfied with them let me know, and I will never recommend another implement. I am not puffing on account of being paid for it. I never took a cent for that. Messrs. Remington & Co. sent me the bill when they sent the cultivator, and I sent the pay the day it came to Geneva. Shares' Horse Hoe is a good implement to work corn or potatoes on loose soil, but nothing like so good on stiff soils as the cultivator. Their steel plows are also excellent, so far as I have seen. They are a great firm to work in steel. I would advise all those having stiff soils to get their cultivator.

Near Geneva. JOHN JOHNSTON.

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[For the Country Gentleman and Cultivator.]

NORTHERN AND SOUTHERN CLOVER.

Messrs. Editors—I notice your quotation from the Boston Cultivator, on Clover, which says "the northern is much the largest growth, the stalks being sometimes 3 or 4 feet long and as coarse as pea vines—the southern grows scarcely half the height, and matures much earlier, makes more blossoms than the northern, and the second growth of the same season is usually more abundant than the northern, often nearly equalling the first, and being *generally preferred for seed.*" Now I never saw a second growth of the large clover. The large clover if cut for hay once, cannot be cut again that season—the seed has to be taken from the first and only crop of the season; and the small or southern clover won't produce seed the first crop in the season, unless pastured off until about 15th June, and then it will generally give a better crop of seed than when cut about the last of June. I have wondered why the seed of what the Boston Cultivator calls northern, should bring most money in market, as I never could see the use of raising it, unless it was for the seed. As hay I think it worthless, but it must answer somewhere, else the seed would not sell highest. John Johnston.

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[For the Country Gentleman and Cultivator.]

BURYING STONE.

Eds. Co. Gent.—In your paper of March 21, p. 187, you copy from the New-England Farmer, an article upon clearing fields of stone by burying them. I have had a little experience in this matter, and think it the easiest and cheapest way of disposing of them.

Upon about two acres of my farm there was quite a number of large stone, partly above ground, that were very uncomfortable to work around with the plow and drag, and I disposed of them as described in the article referred to. They are now sleeping quietly beneath the sod, and out of the reach of the plow. I buried some that could not have been taken from the field with three yoke of oxen. But one thing is very important in doing this work, and that is, be sure and dig the holes *large* and *deep* enough—especially for large stone—before tumbling them in, so that if they fall either side, or end up, they shall be out of the reach of the plow, for it is very difficult to move them when in the hole. To bury very large stone, the hole should be dug partly under them, as it is much easier getting them into the hole—and they should be at least a foot below the surface when buried.

Jefferson Co., N. Y. J. L. R.

[For the Country Gentleman and Cultivator.]

Feeding Stock---Inquiries Answered.

Watertown, N. Y., March 30th, 1861.

S. Edwards Todd—I have been very profitably interested in your articles on feeding stock, and I hope you will continue them. We want volumes of just such articles—something that is practicable for common farmers.

Will you allow a stranger to ask you a few questions; not, however, as a catechist, but as an inquirer after truth, and it will be quite as satisfactory to me—and will benefit others probably, if you will answer in the Co. Gent.

1. I am in great doubt about there being so much profit in feeding stock, as yourself and John Johnston speak of. Now can you explain to me why I cannot make feeding stock "a paying business," as well as yourself and others?

2. Mr. John Johnston says: "A steer, with first rate pasture, should gain 400 pounds in a season of pasturing." Now, is that possible, and how does it accord with your experience?

3. I have a few steers, three years old this spring, which I have been feeding the winter past, and they are tolerable good beef, but not first rate. They will weigh from twelve to fourteen hundred pounds each, live weight, and I can sell them to butchers for $40 each. Now if you were in debt, as I am, would you sell them for $40 each, or would you keep them until another spring? These inquiries must suffice, although I would like to ask many others. E. D. P.

Answer.

1. To remove a man's doubts about feeding stock being a profitable business, would be almost like draining a wet field without a good outlet. Of course, I nor any other man can tell, when at a distance, why a man fails in his efforts to feed stock with profit, but could the system of farm management, and stable management, and cattle management be all spread out before us, it would be a very easy task to determine where the leakage is.

As to the *profit* of feeding stock, there is not a *shadow* of a doubt in my own mind. I *know* there is great profit in it, when every thing connected with the business is conducted systematically, and *with a proper reference to the improvement of the soil.* Feeding stock and raising grain, in order to be attended with the greatest profit, must go hand in hand. It will not answer to look simply to the value of the stock, which have consumed the products of the farm; we must have an eye on the increased amount of grain which the manure of the stock will produce, over and above the amount that would have been raised, had there been no manure applied to the soil.

For example, suppose we feed a lot of cattle one hundred dollars' worth of grain, and by very close figuring, we barely get market price for that grain, making no account of the labor required to take care of them. Where is the profit? Why, if all the manure is carefully saved and judiciously applied to the soil, and if the soil is drained as it should be, the manure will produce so much more grain, than would have grown *without* it, that any reasonable man will discover at a glance that *here*—in the greater crop of grain—he receives an ample remuneration for his services while feeding his stock, and also for the interest on the capital invested while he was preparing his stock for market.

If friend E. D. P. will investigate this subject, he will doubtless discover that his stock is not exactly of the best kind to take on flesh well, or that he has not kept them growing all the time from year to year, or that he has overstocked his pastures in the summer, or that he has not saved, and applied in the best manner all the manure to his fields, or that his soil has been too wet to allow the manure to benefit the crops as much as it would have done had it been thoroughly drained. Here is a long chain of very important contingencies, which have a very important influence in feeding stock with profit; and if only one link is wanting, there will be a bad leakage in the profits of the business.

2. Mr. John Johnston wants nothing at all to fully substantiate his assertion, with reference to the number of pounds which a steer should increase during one season. He spoke a great distance *within* bounds, and my experience fully endorses and *exceeds* this statement. I will pen a few facts with reference to the poorest calves I ever raised.

Four years ago this spring, as many farmers had recommended *feeding* calves, instead of allowing them to suck, I thought we would try our success in that mode of raising calves; and so we fed them milk as soon as it was drawn from the cow's udder, for several weeks, and then began to mingle skimmed milk with it, and also a little wheat flour. But they soon were attacked with the scours, and in the fall I was so mortified at their appearance, that I resolved never to try to raise another calf by hand.

During the succeeding winter they were fed cut cornstalks in the morning, cut feed, with a quart of meal each at noon, and hay at night. Two or three times a week they would get a few quarts each of roots. The next summer they increased about three hundred pounds each. The next winter they got cornstalks in the morning, and oat and barley straw during the day, with a peck of turnips each at noon, and hay at night. In the spring, when turnips failed, they received about a quart of corn and oat meal each, daily. When they were turned to grass, the meal was discontinued, and when those steers were 29 months old, they weighed from twelve hundred to twelve hundred and sixty pounds each. They were worth four cents per pound, live weight. Steers that I raise by allowing them to suck for three months, have always been heavier than these at that age.

3. I would not sell steers of that weight for that price, unless the sheriff were after me, and I could hire no money. Don't be afraid, if you are a few dollars in debt. Keep your steers improving. Have them weighed occasionally. Don't let them fall away next fall nor winter; and next spring, having given them four quarts of meal each, all winter, begin to increase their daily allowance until you feed them eight quarts each, daily, if they will eat it readily. Let them run to grass about two or three weeks and sell them *by weight.* Such steers will weigh like a chunk of lead. Farmers seldom get the fair value of their fattened steers, because they do not know the weight of them. They should know about how much an animal will weigh, and how much it is worth per pound, live weight, and then *ask it*, or they will never get it.

S. EDWARDS TODD.

[For the Country Gentleman and Cultivator.

STRAW BEE-HIVES.

Messrs. Editors—Much has been said and written about straw hives being the best for bees, or straw being the best material for hives, and the chief difficulty, according to different writers, seems to be in making the straw hive in proper shape and form for the present mode of bee keeping. It appears to me that there is no difficulty in making a straw hive of any form. I am not largely in the "bee line," having only a few "for old acquaintance sake"—bee hunting having been a favorite pastime and pursuit in my youth, more than forty years ago.

I have always had a strong attachment to the old-fashioned straw hive, such as used to stand around the house and gardens in "ye olden time," and am aware that a change in shape and form of the old straw hive to the form required for present uses, would destroy much of the poetry and romance that hang around it; but the "aid and comfort" to the bee in a well made straw hive, of proper shape and form to receive the Langstroth frames and honey boxes on the top, will be about the same as in the old-fashioned conical and poetic hive. I have a plan on which I propose to make a straw hive adapted to present use. It is first to make a frame of the size and shape of the required hive, of willow or hickory rods—a skeleton frame—and on to this bind, braid, or twist the straw. In this manner a straw hive can be made, without any difficulty, of any size or shape. An upper one for the honey boxes can be made in the same way, with a flat straw roof, over which a thin water tight cover can be placed, with projecting edges. Hives can be made of this material cheaper than of boards, lighter to handle, and with movable comb frames can be kept perfectly clean. P. *Brooklyn, N. Y.*

[For the Country Gentleman and Cultivator.]

WHEAT ON SOD LAND.

Messrs. Eds.—Your correspondent, J. T. T., in the Co. Gent., of 14th March, tells of having harvested the past season, on seven and a half acres of land, a crop of winter wheat at an average yield of over thirty-three bushels per acre, weighing 63½ pounds per bushel, and further remarks:

> "By the way, should not our farmers sow their wheat on sod ground and follow with corn, instead of planting corn on sod ground and following with wheat? I think they should, and believe substantial reasons can be given. What say the wheat growers? My success has been on sod ground."

Some over a year ago I received a letter from Hon. Asa P. Cate of Northfield, N. H., giving the result of his views and experience in the culture of winter wheat in New-Hampshire, Mr. C., as far as my knowledge extends, being one of the first that attempted the growing of winter wheat in this section of the State. In the letter referred to, he says:

"I commenced the cultivation of winter wheat in the year 1850, and have continued it without interruption up to the present time. The first year I sowed one bushel of the white bald winter wheat, on the sixth day of September of that year, on land that had grown a crop of corn the same season, the crop having been cut up and removed. * * * I have no minute of the time when I harvested it, but I find by my record of crops, that it was threshed August 7th, 1851. It measured up of clean wheat, 24 bushels, weighing 65½ pounds per bushel. As I have already said, I have continued to raise winter wheat ever since, and am perfectly satisfied that it is safer by far, and surer than the spring sown, for most soils in our State. I have grown it on ground which had been hoed, and on the inverted sod, breaking up the same at or about the time of sowing the seed. Out of the time, I have sown four years on the recently broken up land, and I do not see but I have succeeded in one case as well as in the other. * * * There is one other point to which I wish to call your attention, which I liked to have omitted, and that is the time of sowing. I would always insist upon early sowing, say in this section, at least *on or before the 25th of August*. The reason why so many of our farmers fail in raising good crops of winter wheat, is, because they wait for other crops to ripen before they sow. The fact that we can raise good crops on newly broken up land, takes away the objection which many urge as a reason why they will not try to raise their own wheat. Let me suggest *that corn had better follow the wheat, than wheat the corn.* * * * All that is now wanted to secure the great object of raising our own flour, is a knowledge of the fact that winter wheat can be raised successfully on the hill-sides, and on the plains, and in the valleys of our State."

From the preceding it is seen that the two writers above quoted, entertain precisely the same views. And by repeated experiments I have made within the past nine years, I feel fully authorised to say their views are correct, and of practical application—perhaps, however, more so to such farmers as are anxious to raise wheat for family use, rather than large quantities for sale. In this, my object is to instruct in the matter of raising wheat, the common class of New-England farmers, rather than the great wheat growers of the west.

The land selected for the wheat crop on greensward, should be free from rocks, stumps, &c., so that the furrow slice can be completely inverted, and shut in so as to prevent the grass from springing up among the wheat. It may be that sward land—say a timothy and redtop sod, that has been mown for several years, is not as favorable for the production of a good crop of wheat, without manure, as a clover ley or sod. But the course I have time and again practiced, has been to plow the sod land the latter part of August, or early in September, next rolling the inverted sod for the purpose of closely shutting in the furrow slice, and making it better carting on the manure, applying 15 or 20 cartloads per acre of compost, made in the hovel, by daily mixing muck, loam, sawdust, &c., with the droppings of six or eight head of cattle kept in the barn at night. I use absorbents sufficient to absorb the liquid portions of the manure, and the whole of which is kept under cover till carted on to the field; it is spread and thoroughly mixed with the soil by the use of a "Bucklin Cultivator Harrow," a first rate implement for mixing the soil and manure, and furnishing a fine seed bed. The wheat is then sown and well harrowed; then sow timothy seed, and finish off with the roller. Some say the land should not be rolled after the wheat is sown, but that it is better to have ground rough, as left by the harrow. I have tried both ways, and find no advantage *in not using the roller*, but find the wheat comes up better and more even where the roller is used—besides I prefer to have the timothy seed rolled in, rather than having it harrowed in. In the spring, sow clover seed. I have always obtained fair crops of wheat upon the inverted sod, averaging better than on "old ground." I do not think the wheat is so liable to winter kill on sod as on old ground. The stubble and inverted furrow slices do not pack or close upon the subsoil, as does that after a hoed crop.

In August 1858, I had a number of varieties of winter wheat, originally received from the Patent Office; having increased the varieties somewhat, I plowed a piece of interval sod land, also a piece of gravelly irony sod land, another a deep loamy soil, and a fourth piece, a good yellow; but somewhat rocky upland. All were top-dressed with the compost manure above described. Wheat sown, some the last of August, and others first week in September. Timothy seed sown and rolled in, and the clover seed in the hull sown early in April. The result was, I obtained good crops of wheat from each piece of land, and the past season mowed heavy crops of hay on each piece. Now suppose the wheat had all winter killed, then the only loss in the case would have been the seed and the labor of sowing. But I am inclined to the belief that had the wheat been an entire failure, the grass crop would have more than compensated for the loss of the wheat. The timothy would have headed out in September, and so would a portion of the clover, making a capital winter forage for cows and young cattle. Taking the above view of the *chances* of raising winter wheat, and keeping up the hay crop on the farm, the *risk* of attempting to grow winter wheat in New England is not very great after all, providing the farmer complies with the necessary common sense conditions connected with successful culture of this cereal.

Mr. John Johnston, and we know of no better authorito, insists upon early sowing, and that the manure be applied to the surface, and harrowed in. My experience leads to the same conclusions. By early sowing the plants get a good start, well rooted, and thereby much better able to withstand the ill effects of the winter's cold, and the usual "freezings and thawings" of autumn and spring. By early sowing the chances are greatly in favor of the crop escaping injury from the midge and rust. If the manure is plowed in deep, as some recommend, the plants usually receive but little benefit from the manure in the fall, and consequently are not in a situation to "go ahead" in early spring. Liebig has something to this point in his late work on "Modern Agriculture." He says—"An accumulation of nourishment in the upper layer of a field enables plants, during the first period of their development, to send out ten-fold, perhaps a hundred-fold, more absorbing rootlets than they otherwise would have done, and their later growth will be in proportion to the greater number of rootlets thus gained, by which they are enabled to seek and appropriate the food distributed sparingly throughout the deeper layers."

The importance of obtaining a good start, both in the young plants of our grain and hoed crops, is attracting more attention than formerly. Hence we find so many statements in the agricultural journals of the benefit derived from the application of various concentrated and artificially prepared manures. The start given to the young plants by superphosphate of lime, or other manures, enables it to send out a greatly increased quantity of "absorbing rootlets," which usually tends greatly to increase the crop, and hastens its maturity. This is a matter of much consequence some seasons, particularly with the wheat in escaping the midge, and so in the corn crop in case of early frosts, as was the case in many sections of the country in the seasons of 1859 and 1860. I saw last autumn good fields of corn that were ten days in advance on those portions of the field having been manured in the hill at planting time with a spoonful of superphosphate of lime, and ten days difference in the ripening of corn or wheat makes a grand difference in the value of the crops some years.

If the farmer does not wish to stock down his inverted sod with grass seeds, when sown to winter wheat, but wishes to follow with corn, it will be a good plan to sow in the spring upon the wheat, ten pounds of clover seed and a bushel of plaster per acre, for the purpose of plowing in with the stubble late in the fall; such a dressing is equal to a tolerable manuring. In the spring, cart on green manure and plow in, and corn may be planted with a fair prospect of obtaining a good crop. This course is what is meant by the corn following the wheat, rather than the wheat following the corn crop—oats or spring wheat to follow the corn crop the next season. This may be a good course enough where hay is not the leading object; but where it is, we think seeding with the wheat upon the inverted sod a better way. But farmers must exercise their own judgment in these matters, and govern themselves accordingly. L. B. *Warner, N. H.*

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[For the Country Gentleman and Cultivator.]

SWEENEY IN HORSES.

Eds. Co. Gent.—Each of the articles in reference to sweeney in horses, which have appeared in the Co. Gent. recently, have occasioned me to feel like saying something on the subject. But I have deferred it, thinking perhaps some one else would relieve my mind. Either of the prescriptions given will promote a cure under favorable circumstances. The only trouble about it, is that some persons may be led to suppose that the particular articles named as ingredients of those prescriptions, are essential.

Sweeney is simply a wasting or shrinkage of the part, produced by anything at all that retards or decreases the circulation through that part, and so materially diminishes the natural healthy secretions. Lameness of the foot or leg, so that the horse favors the limb by not bearing his weight on it, and using it as little possible, if long continued, is very likely to induce sweeney of the shoulder or hip. A bruise, if not severe enough to produce rupture of the skin and suppuration, frequently causes sweeney. You may very readily sweeney a horse in either shoulder, by tying up the foot, a la mode Rarey, and so compelling him to throw all his weight upon and direct all his energy to the other limb for any considerable length of time.

A year ago I had a colt kicked, and its leg broken, at three days old. I swung the leg to a sling round its body. For the first week it lay almost constantly, except when helped up to suck. It then commenced to get up and move about considerably on the well leg, which grew extraordinarily fast, while the other actually seemed to diminish, and shrank or sweeneyed at the shoulder till there appeared to be nothing scarcely at all on the shoulder-blade. At the end of three weeks the bone was well knit, and I turned the leg loose; but it was now not more than two-thirds as large as the other, and quite three inches shorter. I watched the colt closely, but did not see it attempt to put it to the ground or use it, for more than a week, and had nearly despaired of its ever doing any good, when I one day saw it bend down on the well leg and touch the foot of the other to the ground, evidently trying whether it could bear any weight on it. From that time it used it more and more every day. The leg grew rapidly; and though I did nothing to the sweeneyed shoulder, it soon filled up again, and in a few months no one could tell from the external appearance which leg had been broken.

Remove the immediate cause of the shrinkage, and nature will mostly restore the muscle without further assistance. Her recuperative powers may, however, be aided, and a cure hastened by any stimulating application to the parts. Coal oil, British oil, or any thing of that kind, caused to penetrate by elbow-grease administered by way of friction, will hasten their restoration. Horses suffering with sweeney should always be allowed to rest as much as possible, both on the score of humanity, and because when in use the well limb is constantly making extraordinary exertion, and thus diverting to it the powers of nature which would otherwise be directed to the restoration of the other. Wm. H. Ladd.

Richmond, Jefferson Co., Ohio.

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[For the Country Gentleman and Cultivator.]

HUNGARIAN GRASS.

The seed should be sowed in this latitude from May 20th to June 1st. I have usually sowed about the 25th of May, while others have waited five to ten days later. By sowing early, the crop matures so that the grass may be cured before the heat of summer has passed away. Sometimes it is cured with great difficulty, when sowed late, as it requires a great deal of sunshine to cure it well.

A half a bushel of seed to the acre is not a whit too much, although the rule, as laid down by western growers, is eleven quarts.

It yields on good soil about three tons to the acre, and produces from 20 to 30 bushels of seed per acre, worth as much as any other grain to feed to stock; and the quality of the hay is scarcely diminished in value at all, when the grass is not cut till the seed is ripe, it being but about a *week* later than the time to cut it, when the seed is not left to mature.

The value of the hay is fully equal to that of the best timothy and clover, and is as readily eaten by all kinds of stock as that hay is.

A correspondent of the Co. Gent. asks if wheat may follow this grass. Certainly, but not without a spreading of barn-yard manure upon the land, unless it be very fertile. T. B. Miner. *Clinton, N. Y.*

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[For the Country Gentleman and Cultivator.]

RAISING CALVES.

Messrs. Editors—After trying various ways in raising calves, I find the following not only the cheapest, but for ought I see as well for the animal as to let them suck the cow or feed them with warm milk from her, wintering better, and worth more when one year old.

Take them from the cow at three days old, milk and feed them till three or four weeks old, and the next three weeks use a small teacup of wheat shorts, well stirred in a small quantity of cold water, then add as much boiling water as will make one half the meal for feeding, putting in new milk for the other half, or even skim milk that is sweet, and the calf will not scour, but will do first rate, if you give scalded shorts alone the fourth month.

W. Winsted Conn., May, 1861. JUDSON WADSWORTH.

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Barley for Pork Making.—At a Farmers' Club in Illinois, reported in the Farmer's Advocate, inquiry was made for experience in feeding barley to hogs. One member had fed it, but without comparison with corn, as to value. "It made the best sweet meat, and free from the oiliness so common to corn-fed pork." Another thought barley double the value of corn for fattening purposes. The inquirer said his attention was called to it by the great success of an eastern farmer in fattening pigs on ground barley and milk, getting 300 pounds dressed weight, at nine months old.

[For the Country Gentleman and Cultivator.]

FATTING MILCH COWS.

Messrs. Editors—In the Co. Gent. of April 4, an article on the culture of the carrot, from your correspondent G., contains the following statement:—"When taken in connection with other feed, they are invaluable. They are not only healthy, but will fatten cattle, sheep, and horses. I have fatted and sold four head of cattle this winter on carrots, with one quart of meal sprinkled on them at a feed, together with cornstalks. One was a Durham cow, milked all the while until *sold for beef, and was fat.* This was an experiment, and proved satisfactorily that cows can be fatted on carrots and meal, and milked at the same time. At no time was the meal over two quarts per day."

The idea of fattening cows and milking them at the same time may be a new one to many, but it is none the less true, as I have proved by my own experience, and also that of others. It will generally take longer to fat a cow if she is milked during the time, than it would if she was dry, but the milk will more than pay for the extra amount of feed taken to fat them.

A few years since I had a cow that I wished to sell in the fall, but could not get what I thought she was worth, so I concluded to try the experiment of fattening and milking at the same time. I commenced feeding her with small potatoes, with some partly rotted; after these were gone she was fed with turnips until about two weeks before she was slaughtered, when she was fed with meal. The roots were fed night and morning, and the meal the same. Aside from this the cow had no different care or keeping than the other cows with which she was kept. I commenced fatting her in October, and killed her about the 1st of January, and she made as good beef as I often have. During the time she was fatting she gave about a pailful of milk a day, and I estimated at the time she was killed, that the butter made from her milk during the time she was fatting, amply paid for all the extra feed it took to fat her, and consequently affording the beef which she made at a low price.

Several years since I visited a friend of mine living in New-York city. This gentleman was a pastry baker, and he kept a cow to supply his family with milk and cream. On going to his stable with him to see his cow, I was somewhat surprised to see a *fat cow*, which he milked a pail half full of milk from, and he informed me that the day before he had sold her to a butcher for beef, and that he got the price of first class beef for her. In answer to my inquiry, how he kept his cows? he said it was his custom to buy a new milk cow, put her in his stable, and keep her there until she went to the butcher. He never let them out of the stable, but carried their feed and water to them. They were kept from nine to eighteen months, the length of time depending on how their milk held out, and the condition they got in for beef. They were fed two quarts of meal each day, with what hay they wanted, and they also had the trimmings of the squashes and apples which were used in the bakery, which in the fall of the year were as much as he could make them eat. In this way he secured pure and fresh milk and cream for his family, and got more for his cows when he sold them than he paid for them.

One of my neighbors fatted a cow during the winter on hay and potatoes. At the beginning of winter he commenced feeding her about a peck of potatoes a day, increasing the quantity towards spring; she was also fed what good hay she would eat. She was milked daily till spring, when she was dried of her milk. Having become fat at this time, she was sold for beef, and taken to market.

Wilmington, Vt., 1861. C. T. ALVORD.

☞ The next Annual Fair of the Cattaraugus Co. Agricultural Society will be held at Little Valley on the 11th, 12th and 13th of September.

[For the Country Gentleman and Cultivator.]

Product of Butter per Cow.

Messrs. Editors—I have been much interested in Mr. Wattles' statement of his "Dairy Products" for several years past, because it bears on its face *a naturalness* that commands the confidence of all who peruse it. By it we learn that the *annual product* of his cows ranges from 210 to 280 pounds of butter each, or an average of about 240 pounds per cow—or about three-quarters of a pound per day for each cow. This is not so much as would be expected by those who are accustomed to look upon cows as competent to yield a pound of butter each, daily, through the year. I have known cows that would do this; but I believe they are few and far between. If you or any of your readers have ever known a herd of half a dozen that did as well as this, I should like to be informed respecting them. J. W. P. *Essex Co., Mass.*

[For the Country Gentleman and Cultivator.]

CHESTER COUNTY BUTTER

In the Country Gentleman of April 4th, I saw an article under the above heading, signed "S. E. M.," and wish to correct an error into which your correspondent has fallen, with regard to *working* the butter he so justly praises in his first paragraph. Chester county dairymen long ago abandoned the "old fogy" ways of carrying their butter to market in a wallet slung across a horse's back, or in a one-horse cart, and also of churning by hand-power. They *do not* work their butter with a "bowl and ladle," nor with a cloth, "rinsing and wringing," &c. They use "Embree's Butter-worker," with which a child, ten years of age, can work 20 lbs. of butter *completely* in less than five minutes, without making it "waxy or salvy," and without breaking the grain or injuring the texture of the butter. Tell "S. E. M." that "a single trial will convince of this." W. D. S. *Westchester, Pa.*

How Long should Cows go Dry?

In answer to this question, a correspondent of the Ohio Farmer furnishes the following sensible suggestions. After saying that no rule could apply to all cows alike, he adds:

"I have found that cows inclined to take on fat could be milked up to within two weeks of calving, and have both cow and calf healthy and plump; and cows that could not be fattened when milking, required from four to six weeks of rest from milk giving previous to calving, otherwise the calf was small and not well formed, and the following year's supply of milk much lessened."

[For the Country Gentleman and Cultivator.]

Colors in the Flower Garden.

In response to a query as to the arrangement of colors in Flora's flower bed, I wish to suggest that her circular beds be planted with a centre of the Heliotrope, then a ring of white Verbenas, and on the outside a ring of the Defiance or other scarlet varieties. This will give the "red, white and blue," just now so much in vogue for all sorts of purposes; and a bed of five feet in diameter thus arranged, as it seems to me, could scarcely fail to produce a very pretty effect. Bunting.

To Kill Cockroaches.

Mix equal quantities of red lead and Indian meal with molasses, making it about the consistency of paste. It is known to be a certain exterminator of roaches. A friend who was troubled with thousands upon thousands of them, rid his house of them in a few nights by this mixture. Put it upon iron plates, and set it where the vermin are thickest, and they will soon help themselves, without further invitation. Be careful not to have any article of food near where you set the mixture.

[For the Country Gentleman and Cultivator.]

How Fowls and Birds Grind their Food.

Fowls have no teeth to grind or masticate their food with, and the best they are able to do with it at first, is, to pick it to pieces and swallow it whole. Kernels of grain are swallowed *whole* by them, and as they are surrounded with a tough pellicle or skin, which the juices of the stomachs of animals will not readily dissolve or digest, they could obtain no nourishment at all from grain, if this tough pellicle were not broken.

Let horses, cattle or people swallow kernels of grain, or ripe seeds of fruit, *whole*, and they will pass off in the ordure unbroken, and most of them will not lose their vitality, in consequence of such a process, and such grain would afford no more *nourishment* than so many smooth gravel stones.

Now if we dissect the gizzard of a fowl of any kind, we find a lot of small gravel stones, which are usually the hardest kind of flint, granite or sand stone. Surely here is a pocket edition of Farm Grist Mills. The *mystery* is, where do fowls find such little flint-like stones, when their abode is on farms, the soil of which is a complete mold or muck, destitute of gravel, or when they are confined in close quarters for month after month, during winter for example, or in a grass yard in warm weather. These little gravel stones are *very important articles* with fowls—quite as important as the teeth of ruminating animals.

Fowls swallow their food, broken or not, and it enters the crop or first stomach, and remains in it until it has become softened, more or less, when a small quantity at a time, just as grain runs into a grist-mill, is forced into the gizzard, among the gravel stones. This gizzard is a strong musculous stomach, and plays night and day, when there is a grist to grind, similar to a bellows, contracting and expanding, thus forcing the gravel stones into the grain, and breaking it to fragments, and triturating the whole mass; after-which, it is in a suitable condition to be quickly digested. Of course, these little stones will become *very dull*, after having been in operation for a month or two, and the gizzard, like an economical miller, throws them out of doors, and demands a better set; and if they are not furnished, of course the grist is not half ground, and of course more than twice as much food is necessary to sustain life, and form eggs, as would be required were it well ground; and of course the eggs of fowls would cost double in this case, that they would in another with the same food. This suggests the importance of supplying fowls and birds in cages with plenty of sharp gravel stones, and of having their food bruised or ground fine before they eat it; and it suggests

The Importance of Allowing Fowls to Feed themselves.

When fowls have access to grain all the time, we see them eat, in the morning only a few kernels at a time, and after an hour or so, they will take a few kernels more, and thus they pass the entire day by eating a little at a time, and very often.

The philosophy of their eating so frequently and but a little at a time, is, the food has a sufficient time to become softened in the crop before it passes into the gizzard, and it has sufficient time to be thoroughly ground and digested; whereas, when fowls are not allowed to have access to their food, but are fed once or twice a day, they become very hungry, and swallow as much as their crops will hold at one feeding. Now for several hours, no food will be softened sufficiently to pass into the gizzard, consequently their grist mill must stand idle. Now the moistened grain swells and distends the crop of the fowl, and it feels by no means comfortable. Shortly all the food in the crop is in the proper condition to be ground, and the result is, that it is forced through the gizzard with so much rapidity, that it is not half ground, and therefore cannot be half digested; and if it is not half digested, of course not half the nutriment, or egg producing material, can be extracted from it. Nor is this the greatest drawback attending feeding fowls only once or twice a day. When a fowl fills its crop at one feeding, before the food can possibly get out of it, it begins to heat up, and derangement and ill-digestion follow, very much as is the case when we fill our stomachs as full as they can be crammed.

The way to feed fowls, and particularly those that are laying, or being fattened, is to allow them to have free access to food at all times. In this way they can always supply the demands of their stomachs and grinding apparatus, exactly as food is needed; and they will fatten more rapidly, or lay more eggs, and consume much less food, than they will if they are fed as much as they will eat twice a day.

My practice now is, and always has been, to allow my fowls to have free access to corn in the ear all the time, both summer and winter. Of course they are obliged to shell it for themselves. Occasionally we feed them screenings, and when we have no screenings we take a peck or so of wheat, and as much buckwheat, oats, barley or rye, and mingle them all together, and mix the grain with some chaff, so that they will not be as liable to consume as much of it at once, as if it were clear grain. When we have an abundance of milk, we place a vessel containing it where they can find it at any time. In warm weather, after it has become loppered, they will consume during the day, much more of it than one would suppose. And milk is as good to fatten poultry and make chickens grow, as it is for pigs; and it is one of the very best kinds of food for any kind of poultry, when they are laying.

Lake Ridge, Tompkins Co., N. Y. S. EDWARDS TODD.

[For the Country Gentleman and Cultivator.]

FECUNDITY OF THE PIG.

As a matter of curiosity we sat down a few evenings since and made the following calculation of the fecundity of the pig. Would you credit the assertion, that in ten years, from two breeding sows, many millions can be produced? Would you suppose—for we certainly had no conception of the fact—that more than the present population of the country for ten years to come, is not equal to the number of pigs to be thus born and bred in the same period, if we choose? But we shall proceed to the proof, and give the figures, which are unanswerable arguments when well founded. The calculation is, that in one year two sows will produce ten pigs each, of which we shall assume that one half are females, and proceed on that assumed equality.

The first year there will be twenty males and females; from which take ten males, and we have as the result ten as breeders. The second year then we may take the same ratio of ten to each, and it gives 100 males and females, consequently leaving 50 for breeders the third year. Applying the same principles throughout, viz., third year, 500; fourth year, 2,500; fifth year, 1,250; sixth year, 62,000; seventh year, 312,000; eighth year, 1,562,500; ninth year, 7,812,500; tenth year, males and females, 39,062,500! Have we not brought our pigs to a good market?

But to equalize the supply we shall for the present purpose take only the male half of the pig population for food, leaving the breeders to go on. In this way, then, we can kill and eat 10 the first year—no bad increase from two sows, recollect; the second year, 50; the third year, 250; the fourth year, 1,250; the fifth year, 6,250; the sixth year, 31,250; pork in abundance now—the seventh year, 156,250; the eighth year, 781,250; the ninth year, 3,906,250—still more abundant; and the tenth, when divided in like manner, the enormous quantity of 19,531,250 for food, without interfering with the breeders, who we presume by this time will probably require killing also.

Now we are not aware that much commentary is required on this prolific subject. Every one who reads this short paper, will at once draw his own conclusions from the facts. They are, however, of a very cheering description, and drawn from the breeding of one domestic animal only, and amply prove what abundant stores Nature, and the God of Nature, have provided for human subsistence. We shall close this article with this observation—after all, it is by practice only that the benefits open to all are to be received:—

We will, for the sake of argument, suppose that the State of New-York contains thirty-one thousand agricultural families or farmers. It is a very easy matter for each to keep two breeding sows, which in three years would produce, in round numbers, fifteen millions!

Springside, 1861. C. N. BEMENT

He who feels his own deficiencies will be a charitable man for his own sake.

Inquiries and Answers.

Charcoal as Manure.—We are located in a well timbered country, too remote from a market for our refuse wood to use it profitably; and our lands require fertilizers to make their cultivation remunerative. Now it has occurred to me that as chemistry assigns to carbonate of lime and charcoal the same principal constituent, viz., carbon, that to compare the price of lime, which costs 17 cents per bushel, with that of charcoal, which costs 5 cents per bushel, that charcoal would be the cheaper fertilizer, unless there is something connected with its use that I am not acquainted with. If you, or any of your readers, can give me any information, it will be thankfully received, regarding their relative value, particularly as regards the utility of charcoal as a fertilizer; it is not used here, but lime is extensively. D. D. Gitt. *Arendtsville, Adams Co., Pa.* [Lime and charcoal are entirely distinct in their operation on land. The carbon in carbonate of lime is in such a state of combination as not to be regarded as manure. It is the lime only that is valuable. Many statements have been made of the great value of charcoal, but none, that we are aware of, that can be relied on to show its effects as compared with other manures. Many are familiar with the fact that the site of a coal pit continues unusually fertile, often for more than half a century, but we do not know how much credit to assign respectively to the charcoal, alkali, burnt earth, &c. We can only recommend to our correspondent to try several accurate experiments on a moderate scale. We are inclined to think that where charcoal is only 5 cents per bushel it might be most profitably used by pounding fine, and mixing in compost with the richer or more concentrated manures.]

Hen Manure.—I have some ten bushels of hen manure, saved since last August in the dry, and would be glad to learn the best mode for using it, particularly for corn and potatoes, or garden vegetables I intend planting 8 acres with corn, and 2 with potatoes, and as my garden is rich enough, I thought it would be best to use it on those crops. As I presume it would not answer to apply it without some admixture, I desire to learn the best mode of composting it, and then of applying it. As this is a kind of manure which every farmer can have, an answer to my inquiry through your paper may be of great service. M. R. *Newton, N. J.* [First pulverize the dry hen manure thoroughly. It may then be mixed with plaster, dried peat, &c., and thus constitute a concentrated compost. But an easier way, and nearly if not quite as good, is to apply the powdered hen manure at once to the earth. A spoonful will do for each hill of corn; scatter it over several inches square of surface—if 8 or 10 inches square all the better. One or two strokes of the hoe will mix it; then drop the corn and cover it. Billings' and other corn planting machines, will drop the hen guano with corn, with a stratum of earth between.]

Plow for Stony Ground. — I want a new plow; which is the best kind for land such as mine, in which are some fast rocks, lime-stone and others, and many round stones from the size of a large apple to that of a small watermelon. I want to plow deeper than has been usual in this neighborhood. M. R. [There are so many good plows of different patterns made in all neighborhoods, that we could not point out the best for each. Our correspondent should examine the different manufactories or warehouses, and make his own selection. For stoney ground, the plow should be short, so as quickly to enter the ground, if thrown partly out; or so as to vary readily from the right line in passing around the larger stones.]

Arbor Vitæ Hedge.—Please to inform me through The Cultivator what distance apart Arbor Vitæ plants shoud be set to form such an hedge, as is illustrated on page 121 of the April Cultivator—also the height of the plant when set out, &c. A. Gleason. *N. E Village, Mass. April* 13th, 1861. [The plants should be about two feet high, unless they have to be brought from a distance, when one foot would be more economical of freight. For a regular hedge the distance apart may be about eight inches, but a good screen merely, may be made by planting them two or three feet asunder.]

Poudrette.—I see you answer all sorts of queries in your valuable paper. I wish to know if the poudrette of the Lodi Manufacturing Company, is to be used as a top-dressing for corn, as we use plaster, or to be used as manure, by putting in the hill with the seed. Tom. [It is not used as a top-dressing like plaster, although sometimes applied usefully as a top-dressing to lawns and grass lands in autumn. Ordinarily it should be mixed with the soil like other composts; and being a concentrated manure is especially useful to apply in the hill.]

Warts on Horses.—Will you insert in The Cultivator, a remedy for blood warts on the legs of a horse. They are nearly the size of a man's fist, are very painful, and bleed considerably. J. C. Hicks. [The following is Dr. Dadd's remedy for warts:—A wart having a broad base should be treated in the following manner: Take a common suture needle, and arm it with a double ligature; each ligature is to be composed of three threads of saddler's twine, well waxed; pass the needle right through the center of the wart, close down to the skin; tie each half separately, with a *surgeon's knot*, as tight as possible; cut the ends off pretty close to the knot, and in the course of a short time the whole will drop off. A wart having a small circumscribed pedicle may be removed in the same way, by tying a *single* ligature around its base. If the exposed surfaces should not heal readily, moisten them occasionally with tincture of aloes and myrrh; and if they show a disposition to ulcerate, sprinkle them with powdered charcoal and bloodroot, equal parts. Warts about the sheath or penis should be removed by excision; to do this we often have to cast the animal, the consequent hemorrhage to be arrested with tincture of muriate of iron or styptic.]

The Diseased Pigs.—I notice an inquiry in Co. Gent., of May 2d, in relation to a disease in pigs, which I think we had at my father's some years ago. Some one told him it was caused by worms in the kidneys, and if he would soak corn in lye from wood ashes, and feed them with it, it would cure them, and as far as I remember it always had the desired effect. I remember finding worms about the kidneys of such as had been affected in that way, when we came to dress them at killing time—I think in the fat, but it is some years ago and I was quite young and do not recollect very distinctly. I remember we had more or less affected until we changed the breed. If H. D. C. will try soaking corn in lye, and feeding his pigs, I think it will do no harm and may cure them. E. T. C.

River Farm, Pa.

Age of Cattle and Sheep, &c.—1. How can I tell the age of cattle and sheep by the teeth?—2. Does a good *butter* cow make the most cheese, and if not, why?—3. Is there any good reason for the practice, common in many places, of "cutting off," or slitting the end of the *tail* in neat cattle, at this time of year, and in fact in nearly *all cases* of sickness? If so, the "why and wherefore," and if not, the same?—4. Is corn meal better, ground fine or coarse, for feeding cattle, and why for or against? A Subscriber. [1. A full account, with cuts, of the changes in the teeth of cattle, will be found in Flint's Treatise on Milch Cows and other works on cattle. All works on sheep show the mode of determining their age.—2. A good butter cow is usually a good cheese cow, and vice versa—although the curd or element of cheese and the fatty, or element of butter, are distinct qualities. Cheese is made *rich* by the butter intermixed. Cows which afford an unusual amount of curd are most profitable for cheese making—and those yielding largely of butter, for butter making.—3. The tail remedy is doubtless a fancy—but many farmers are sure of its powerful efficacy.—4. Corn meal is regarded by many farmers as best when rather coarse—but we do not know of any authentic experiments.]

Feeding Sheep—Unground Gypsum—Madder.—1. I am just commencing to raise a flock of sheep. I have five ewes of the native scrub breed—(improved breeds scarce and not to be bought,)—cost five to six dollars. I wish to know whether it is best to feed sheep grain, or whether they will do best on roots, and what kinds, and hay.—2. Will the gypsum as it is dug from the bed, serve as a manure upon its being crushed—if so, what is its value when compared with stable manure?—3. I wish to grow my own madder—how shall I go about it? I have the seed, and would like to know what sort of land, manure, &c, as well as tho best mode of cultivation. S. *North Bend, San Pete Co., Utah.*—[1. A little grain of any sort will no doubt improve the growth of the "native scrub" sheep—begin very moderately, and increase gradually. A portion of their food in roots, would also be advantageous, observing still greater caution to begin with small portions. A mixture of grain and roots with dry fodder has an excellent effect. Red clover, provided it is perfectly cured, is excellent for sheep—and they do well on nearly all cultivated grasses.—2. Gypsum, if crushed *fine*, would answer a good purpose; but as in this state it would dissolve more slowly, it should be in larger quantities, according to the degree of coarseness, and should be applied sooner in the season. A bushel or two per acre is the common rule, when it is ground to fine dust. It cannot be compared with common manure, as the action of the two is entirely different. In rare instances, a bushel of ground gypsum per acre, has doubled the growth of the clover crop—in other and more common cases its effects have been imperceptible. Our correspondent can ascertain the value on his lands by trial only.—3. Madder grows best on deep, rich, sandy loams, with plenty of vegetable matter. The seed should be sown a year before they are transplanted—which is done eight or ten inches apart. The plants are cultivated with prong hoes. The crop is usually taken at the end of the third autumn. There are other modes of management, but we are not prepared to say which is best, or to give the advantages of each.]

Peach on Plum Stock.—1. Do you consider the Canada plum, (Prunus Americana) the best *stock* for budding the peach on—if not, which one do you consider the *best?*—2 Will the buds take readily?—3. How long before they come into bearing from the bud?—4. How long will they live and thrive on the plum? D. A. T. [1. The Canada plum is chiefly used for the peach, when it is worked on the plum, and is undoubtedly best for this purpose, next to the peach stock itself.—2. The bud takes readily and grows freely, if the stock is young, thrifty, and in a growing state.—3. They will, as a general rule, bear a little sooner than on peach stocks, but the difference is slight. The peach on its own roots usually bears in three or four years, sometimes in two years; and on plum stocks not much sooner.—4. It is hard to say how long they will live and thrive—especially as there is a great difference in this respect with common peach trees in different localities—in some places they do not survive ten years, while in others they live forty or fifty. We have no knowledge of very old peach trees on American plum stocks; can any of our readers give any information on the subject?

Quincy on Soiling.—Two years or thereabouts ago, I saw an account of a Massachusetts gentleman (I think Mr. Quincy,) keeping his cows in yards and stables the year through or soiling his stock, as the term is used. It was published in your Cultivator, but gave no particulars of his mode of feeding, &c., during the summer, the profits of it, &c. I should like to read his experience or that of some one else that has tried it. O. T. S. *New-Hackensack.* [We can send you "Quincy's Essays on Soiling Cattle," by mail post-paid for 75 cents. You will find his experience therein detailed at length.]

Wheat on Sod Ground.—I read with interest in the last Cultivator, an account of J. T. T. of West Chester county growing wheat on sod. I and many others, probably, would like to know his whole process of preparing his ground for the wheat, through the Cultivator—the time of plowing, how often, when, and how he applies his manure? A Subscriber.
Quakertown, Penn., 4th mo. 17, 1861.

Soiling Cattle.—I desire to commence keeping my stock on the "soiling system," but I am almost entirely ignorant of what I need in the shape of an enclosure and its appurtenances—also of the kind of crops best adapted for green food, and also of the probable expense. My stock consists of 40 cows and heifers, and four horses. Can you either give me the desired information through your valuable journal, or give me the address of some person who would be likely to know about it? A New Subscriber. *Oneida Co., N. Y.* [The change from the old system to that of "soiling," is too important to be undertaken until one has thoroughly informed himself as to all the details necessary for the successful adoption of the new system. We shall be glad to hear from any of our readers who have had practical experience in "soiling," and would also refer our correspondent to Quincy's Essays on Soiling Cattle, which we can send for 75 cents.]

Preserving Fresh Fruits.—Please inform me through the Co. Gent., if all kinds of fresh fruits, such as berries, plums, cherries, peaches, &c., can be preserved over winter, if the air is exhausted from the jar by an air pump, without the fruit being scalded, as is usually done at present. C. Byles. [The mere exhaustion of the air will not preserve the fruit—it contains within itself the elements for active fermentation, if outward air is entirely excluded. As a general rule, it must be at least slightly scalded, that is heated up to the boiling point of water. A large quantity of sugar will doubtless require less cooking than when smaller portions are used. Green or unripe gooseberries will keep if corked tight, and kept in a cold place, without any cooking or sugar.]

Zinc Paint.—There is one question I should like to ask through The Cultivator. Which is the most desirable for house painting, white lead or white zinc, both inside or outside of the building? A Subscriber. *New-Jersey.* [White lead is decidedly the best paint, although not so cheap as zinc. The latter is apt to scale or peel off the outside; but we are informed that one or two coats of lead applied first, will prevent this difficulty. Zinc for inside work does not retain its color so well as white lead, but is successfully used where color is added.]

Hay Elevator.—Can you inform me if the Hay Elevator advertised in your paper is approved of, and how much the smallest size, *without* pulleys and ropes, (which I have already fitted, will cost? C. T. S. *Harvard, Mass.* [We have never witnessed the operation of the hay elevator spoken of, but have no reason to doubt its value and efficiency. The hay-fork worked by a horse, has long proved the value of well applied horse power to pitching hay—we have known hay to be unloaded, by its assistance, at the rate of one ton in two and a quarter minutes, where the mow was on a level with the load. Our correspondent may learn the cost of the elevator by addressing the manufacturer, whose address was given in the advertisement. If advertisers would always mention prices where practicable, it would be a great advantage to all parties. As a general rule, an advertisement with prices given, is worth at least three without.]

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[For the Country Gentleman and Cultivator.]

Experience with Chinese Sugar Cane.

Eds. Co. Gent.—The hue and cry about sugar cane has nearly subsided. Still, now and then, one sends in his experience, either for or against it. Now I was and am one of those who are led away, as my neighbors say, by every thing "new and uncommon," and of course had to be haltered by cane. The first season I tried it, which was in 1857, it was planted the same day the corn was planted, and on the same kind of soil, and received the same care, and the result was, it just made out to head or tassel. The next year it was put into the best and warmest soil I had, and extra care taken of it, and it did not ripen its seeds before Jack Frost visited us. The next trial, I procured seed from Minnesota, raised in latitude 47° North—planted them the same time I did corn, and cultivated the same, and not a stalk headed.

You will see by an article in the Co. Gent. of May 2, that I always plant corn on sod inverted just before planting, and the cane was planted beside the corn and at the same time. I have known cane to be raised in this neighborhood, and get ripe; but one thing is settled in my mind, and that is this: *You cannot raise sugar cane where you can corn, and with the same care no and more.*

Springwater, N. Y. Byron

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[For the Country Gentleman and Cultivator.]

CORN FODDER AND CUTTING IT.

Your correspondent, J. L. R., finds no advantage in cutting cornstalks. His experience is the same as that of many others. The stalks are all cut too long, forming hard solid chunks, which cattle don't want. But when cut short enough—say about one-sixth or one-eighth of an inch, forming a material nearly as fine as chaff, cattle eat all. A large and successful farmer attached the right kind of cutter to his six horse power, running them through with great rapidity, and reducing them nearly to powder; three or four hours would enable him to cut enough for his large herd for a week. If the stalks were good, not rotten nor mouldy, there was not rouble about having all eaten. X.

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RELIEVING CHOKED CATTLE.

A Portland correspondent of the New-England Farmer, gives the following easy and simple remedy. If any of our readers have occasion to try it, will they please write us the result:—

The instant a creature becomes choked, no matter what with, the throat becomes dry, and the longer the substance remains, the dryer the throat. The following is a sure remedy. Take some oil, no matter what kind, and hold the creature's head up and turn down about one gill of oil, and then let go of the head, and the creature will heave it out in two seconds! I have tried it for years, and never knew it to fail.

THE CULTIVATOR.

ALBANY N. Y., JUNE, 1861.

☞ If there is a constant tide from Country to City, swelling the numbers of those whose ideas of Nature are mostly derived from the pavements beneath and brick walls around them,—there is an important ebb already noticeable in the contrary direction, carrying back again to the country the capital gathered in city pursuits, together often with a spirit of improvement and enterprise which it must be confessed is not always manifested by those who have never had any other occupation than the Farm alone provides. "There are numbers of men every year now-a-days," writes an observant friend in a private letter just received, "who are leaving business in the cities and large towns, and retiring either to the old homestead in the country where they were born, or to other farms they have purchased, which they intend to improve highly, and to convert into attractive, pleasant rural homes. Almost every man now doing business in the cities, who went there a boy from the country farm, has an ideal or longing desire, or settled determination, that some day he will go back to the country and have him a grand farm, nice stock, pleasant home, &c., Numbers of this class, just as soon as they have accumulated some capital, do actually carry out this determination, and actually realise their ideal of life, in so far as mortal man can realise his ideals and desires in this world of disappointments and unexpected changes."

This kind of sentiment is one that should be encouraged in every possible way. It increases the links of common interest between city and country. Each shares more freely with the other, its peculiar advantages. The ex-citizen may blunder and spend his money foolishly, in search rather of recreation than of profit. But we could point to other cases; in which the merchant has thrown down the ledger of imports and exports—the tradesman given up the order-book—the mechanic laid aside his tools,—to take up farming with something of the same discrimination, accuracy, good judgment and workmanlike execution which had been taught them in other pursuits; and to apply the capital of their money or labor in such a way that it should yield its dividends from the soil as well as behind the counter. And if Agricultural Schools have any one particular mission before them which they ought not to overlook, it is perhaps the inculcation with their pupils of more business-like habits, in account-keeping and otherwise, and of the more workmanlike completeness and nicety of the tasks they undertake, which in all trades distinguishes the good artisan from the bungler.

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☞ Anything that sheds light upon the causes or the cure of the Potato rot, is of great importance, and a recent contribution to one of our foreign exchanges—it has been so widely copied that we are uncertain in which of them it first appeared—suggests a means of prevention which has the merit, we think, of novelty at least. Reasoning that the disease "is due to the deposition by the atmosphere of a minute fungus, which, taking up its habitation first upon the leaf and the haulm of the potato-plant, propagates with astonishing rapidity, and ultimately finds its way to the tubers and completely destroys them"—the writer argues that this "fungus" is washed down to the tubers by means of rains. He tried an experiment in planting a large part of his crop "in double rows instead of single, the two rows occupying about a foot in width, a foot of vacant space remaining on the outside of each row. They were planted upon the level ground, and hoed up at the usual time." When the tops had attained their full growth, about the first of July, he *turned them over* right and left "toward the vacant spaces, by adding earth between the rows and pressing down the haulms, so as to prevent their retaining an erect position, and to allow the rain, instead of descending to the roots, to run off upon the vacant space." The land employed is characterized as "a heavy clay, about as bad a description of soil as can be devoted to the growth of a potato crop." The result was with the "Regents," a part of which were thus treated, and the others in the ordinary way—that the former turned out to be a good crop, "while those upon the old plan were a complete failure, although grown upon the same plot of ground, and planted at one time from the same seed." The remainder of his potatoes were "Flukes," all put in on the new plan, and yielding "an excellent crop, not two in a hundred being bad," while his neighbors, for miles around, without exception, lost their crops.

The same writer states that others have tried his system with equal success. Its simplicity renders it easily tested, and the statements made appear sufficiently probable to be worth the extra trouble involved for the trial. A case is given in which a number of plank were thrown down upon a potato bed—in accordance with the foregoing philosophy, although not designedly done—and the potatoes on being dug proved to be in excellent order, while those all around exposed in the ordinary manner "were completely destroyed."

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☞ Our Wine growers will have an excellent opportunity in 1862, to offer the World a fair test of the vintages of American production. In the Great Exhibition to be held at London, the Commissioners propose not only to allow the sale of wines in the building, but to permit exhibitors to bring their wines before the public for consumption. In 1851 the orders were that no sales whatever were to be allowed in the building; in 1862 growers and importers of wines who send in wines for competition —it can scarcely be called for exhibition—will be allowed to "hand to visitors cards containing the names or description of the wines, stating that the same may be obtained at such or such a refreshment department; and there visitors may test and try as many vintages as they please, without let or hindrance from the Commissioners." We shall be glad to see Longworth and his compeers side by side with the French, Rhenish and Swiss Wine growers; it is to be hoped they will not overlook the excellent opportunity that will be afforded them.

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☞ A meeting of the Executive Committee of the N. Y. State Ag. Society was held last week at Watertown. The grounds offered by the citizens of that place for the location of the next Fair, were examined, found well adapted for the purpose, and accordingly accepted. They comprise the grounds of the County Society, including about fourteen acres, together with the adjacent track and horse trial ground—both already well enclosed, and provided with numerous buildings, which will answer in part for the requirements of the State Society in September next. The situation must be less than a mile from the railroad station, and but little more than a mile from the central portion of the town; soil dry and sandy, and surface well sodded, so that in case of rain there will be no discomfort under foot. The undertaking on the part of the citizens of Watertown is in the hands of those who will do their best to satisfy all the demands of the Agricultural public. As an instance of their enterprise, it is proposed, we believe, to offer special prizes to a considerable amount, on their part, to those who shall cultivate and contribute the most flowers and plants for the decoration of the buildings at the time of the Fair. This is a good idea, and worthy of imitation elsewhere.

With regard to the Summer Trial of Farm Implements and Machinery, which was mooted at the Annual Meeting, and for which very liberal propositions had been laid before the Board at their last session from the cities of Auburn and Syracuse, and subsequently from Geneva, it was now *resolved to defer* this very desirable event until a season of less political excitement; there being little probability that manufacturers from the East and West would care, in the present condition of the country, to join with those of our own State, and render the occasion what was previously contemplated by the Society, and demanded, we think, by the public, *a more general and complete test* than any that has previously taken place in the United States.

☞ The "Royal Dublin Society" of Ireland, established as long ago as 1731, held its customary Spring Show early in April—from a summary of the results of which in the North British Agriculturist, we learn that the turnout "of Short-Horns was extensive, and competition generally well sustained. Herefords and Devons were not so numerous. The Ayrshire and Polled Angus were scarcely represented. The show of sheep, pigs, poultry, and horses, was rather limited in the numbers entered." With regard to the implements and machines the Irish Farmers' Gazette pronounces the exhibition, "in point of quality, excellence, and adaptation, the best the society ever had: all the principal English manufacturers having at great expense come forward with a choice selection of their best."

But the main purpose of this note, was to call attention to a fact referred to in the first paper above quoted, and of which we were not before aware, with regard to the support heretofore and now extended to this important Society, by Government. For some years after its first organization it was dependent upon voluntary subscriptions, "which annually amounted to about £1,000. After a few years of usefulness, the Irish Parliament voted annually the sum of £10,000 [$50,000!] to the funds of the Society. After the Union with Great Britain the sum granted by Government has been usually £6,000, [$30,000!] which sum is annually voted in Parliament."

Now the Legislature of the State of New-York,—which is considerably larger than Ireland in total area, and has a very nearly equal surface of arable land in actual cultivation,—annually donates the munificent sum of $700 to its State Agricultural Society and—prints its Transactions! We confess our inability to discover any point of view from which the development of our Agriculture appears less important than that of Ireland; or the Agricultural Society of our State a less worthy and efficient agent in accomplishing it, than the "Royal Dublin," if it was placed in the possession of similar means.

☞ "Perhaps, knowing me to be a friend," writes an esteemed correspondent, "you will excuse my saying that now and then it would seem that you do not realize that the mere fact of your publishing a statement or communication gives it a certain degree of authority."

— We copy this friendly criticism for the purpose of saying—as we have on various occasions said before—wherein we do, and do not, exercise an editorial "censorship" over the contributions sent us.

Nothing that we publish over the signature of a correspondent should derive any "authority" from the fact of publication, beyond this—that we have reason for supposing the writer of it to be trustworthy in his statement of facts, and sincere in entertaining the views he expresses. For the *correctness* of neither, however, do we assume any farther responsibility; it is for each reader to judge each statement or communication upon its own merits alone, particularly in those cases where matters of theory and opinon are involved, rather than mere questions of fact. If a writer states that he killed a pig weighing so many pounds, his assertion, which we have no reason to doubt, goes forth in our columns over whatever signature he may have attached to it, and like any other assertion, there is nothing concerned beyond the veracity of its author. But if he goes on to say that this weight was a consequence of certain treatment which the pig has received, or even (for the sake of the argument) that it was owing to the pig's having been born at a certain time of the moon, or on a particular day of the week, then he brings forward a theory with regard to the facts asserted—the probability of which, it rests entirely with him to support by such arguments as he can. The reader is particularly requested and warned to *take nothing for granted*; the burden of proof rests with every writer who goes beyond the range of axiomatic or admitted truths, and the proof that is advanced, should in all cases be subjected to careful scrutiny.

"Suppose, however," our friend might rejoin—"suppose the argument of some correspondent to be plausible in appearance yet erroneous at base,—would you then permit it to appear in your columns at the risk of misleading careless or injudicious readers?" This always depends very much upon the character of each particular case; the risk involved is often counterbalanced, partially at least, by one result, and we may have encountered it for the very purpose of accomplishing this—namely, the strong probability that arguments and experience on the side of more correct views and a truer theory, will be elicited from those who otherwise would not have spoken at all. There is a reluctance felt by many, about coming forward with *their* practice and opinions, unless there is some occasion which renders it essential—some discussion going forward, in which every fact on the right side, *will tell* to good advantage. In the columns of an Agricultural paper, as in a hall of debate, we believe in "freedom of speech" whenever possible; and we do not object occasionally to smile over something that is seriously at fault, if in the end it provokes a useful controversy and draws new facts from private practice into the service of the public.

But it should not be forgotten, in the present uncertain state of agricultural knowledge, that there are many points, about which, being ourselves mostly in the dark, one opinion may be nearly as good as another. Hence, when views are expressed that do not agree entirely with our own, our first desire should be to ascertain precisely under what controlling circumstances those views were formed; perhaps a change of circumstances would justify a change of our opinion. And we may close with this hint to correspondents—that they cannot do better service for our readers and the cause of truth, than to communicate at once—when anything found in our columns differs from what they believe to be correct—their own experience in the premises, in order that the views they hold, with the circumstances which led to their adoption, may be placed on record as a protest, or as an antidote to those which are criticised—or, at least, that they may assist us all in deciding in what condition of affairs one opinion is likely to be advanced, and in what localities or climates, on the other hand, contrary views are actually found to have the preference.

THE CULTIVATOR—PROGRESS PERCEPTIBLE.—A New-Brunswick friend—a clergyman—writes:—"It is with much pleasure that I enclose to you a club of 10 for your valuable paper. It is gradually extending its circulation, and another year, D. V., I hope to send as many more. I have the bound volumes for the last nine years, and certainly consider, for the practical information and useful suggestions contained in them, that one volume is worth what the whole nine cost me. I am endeavoring to get my people, as a general rule, to take it, for I have noticed that wherever a good agricultural paper is taken and appreciated—and yours I consider one of the best—there you will find a different system. If the farmers of our Province would open their eyes, and allow that theory and practice should go together, our agricultural statistics would in a few years present quite a different appearance. There is a change, I am pleased to say, taking place. Cattle of improved breeds are more eagerly sought after, root culture more widely followed, and farms in some localities are managed as they should be—that is systematically and with an eye to the real improvement both of the farm and pocket. C. P. B.

HUSKING CORN.—I noticed in one of your papers a piece about husking corn. We have men on Long Island who can beat it. I had a man in my employ last fall, who husked in four hours in one forenoon, one-hundred and twenty-five bushels of corn, and put it in the wagon. Two of my neighbors and myself measured it, and know it to be correct. The corn was the large white, quite as good as common for this part of the country. The man is about twenty-one years of age; his name is Patrick O'Flanigan. H. P. *Suffolk Co., L. I.*

☞ We are indebted to Prof. E. N. HORSFORD, of Harvard University, Cambridge, Mass., for a Pamphlet just prepared by him upon a very important subject—the Theory and Art of Bread-Making, to which he has evidently devoted much attention. After describing and illustrating by means of several finely executed engravings the composition of the Wheat Grain, the difficulties of bread making, and the effects of the fermentation therein employed according to present methods, he proceeds to develop a new process devised by himself, without the use of ferment, and intended to economize the nutritious constituents of the flour, save time and labor, and obviate uncertainty in the quality of the bread that is made—"by providing agents of known qualities and strength, to reduce to a minimum the measure of skill required."

Several months ago we laid before the readers of the Co. GENT. an outline of the method devised by Dr. Dauglish, an English gentleman, having in view the accomplishment of similar results. Dr. D.'s process, we believe, proved entirely successful in practice, where it could be adopted, as in large bakeries, upon a sufficiently extensive scale. The mode which Prof. HORSFORD now brings to public notice, judging from the account here given of his experiments with it, will be equally as advantageous for family use as for the largest public establishment—enabling, it is said, "a single person to prepare four loaves of a pound each," within five minutes time, the baking of which—they being at once placed in the oven—will occupy from thirty to forty-five minutes more.

We presume the process invented by Prof. H. will ere long be placed within reach of the public—in the form, probably, of raising powders prepared according to the conditions he enunciates, with scientific accuracy, and in conformity with more correct principles than have hitherto obtained.

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☞ We have received through Mr. Secretary JOHNSON the Regulations adopted by Her Majesty's Commissioners, for the International Exhibition of Works of Industry and Art, to be held in London in 1862, to which we have on several occasions already called the attention of our readers. The Earl Granville, K. G., is Lord President of the Council, and F. R. Sandford, Esq., 454 West Strand, London, Secretary.

It is to be hoped that the present difficulties in which this country is unhappily involved, will not prevent the United States Government from appointing at an early day a Commission to communicate directly with the Commissioners of Her Majesty. It is through such a medium *only* that articles of Foreign manufacture are to be admitted, and exhibitors in other countries can have no intercourse with the direction of the Exhibition, except through the Commissioners appointed by their respective governments. "Her Majesty's Commissioners will communicate to such Central Authority the amount of space which can be allowed to the productions of the country for which it acts, and will also state the further conditions and limitations which may from time to time be decided on with respect to the admission of articles. All articles forwarded by such Central Authority will be admitted, provided they do not require a greater aggregate amount of space than that assigned to the country from which they come; and provided also that they do not violate the general conditions and limitations. It will rest with the Central Authority in each country to decide upon the merits of the several articles presented for exhibition, and to take care that those which are sent are such as fairly represent the industry of their fellow countrymen."

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☞ The prospects of the crops abroad, as well as at home, will be watched the present season with unusual interest. Under date of April 29th, the Mark Lane Express reviews the conclusion of the spring sowing season as follows: "The continuance of fine weather, with a highly raised temperature, up to Friday night, has given a stimulus to vegetation generally, both the meadows and corn-fields exhibiting the beneficial change. Sowing may now be considered complete throughout the United Kingdom, and under more favorable circumstances than lately anticipated. Warm nights would now be extremely serviceable after Saturday's snow; and, with steady summer weather following, a seasonable harvest may be expected. *But no weather can replace the loss of wheat plants, or make those that are very weak productive; and the fact remains that less than an average breadth is sown of the most important grain.* With much occupation in the fields, farmers have been too busy to send average supplies to market. Prices, however, have scarcely been supported for good qualities, and the rates of inferior have still been drooping, with sales more difficult, the influence of finer weather and fair foreign arrivals producing the usual effects."

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☞ The Sale of ALDERNEY CATTLE belonging to JOHN GILES, Esq., took place at Woodstock, Ct., pursuant to the advertisement in our columns. Sixteen thorough bred Alderney cows and heifers were sold—one, an imported cow, now four years old, called "Star," for $240, and one, of Mr. G.'s breeding, named "Gault," for a still higher figure, $245. The two next highest were "May Day" and "Zilla" at $170 each; and the average of the whole sixteen was about $128—which we think doing very well indeed "for war times." Seven grades were sold at from $20 to $30 for young heifers, to $45 and $50 for cows. The stock is very highly spoken of by those who were present, and the aggregate of the sale was about $2,400.

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☞ The MARKET FAIR of the Bedford Farmers' Club was held at Katonah, Westchester Co., pursuant to the announcement published in our columns. The weather, especially on Wednesday, the 1st inst., was not very favorable; the second day, Thursday, was a little more comfortable. The chief feature of the occasion appears to have been the exhibition of Farm Implements, and a trial of Plows. We have seen no report of sales effected, either of live stock or farm produce; but it is stated that the desire was expressed by farmers in attendance "to have these market fairs held at least once a month. If a suitable piece of ground could be obtained, and the right kind of permanent sheds constructed thereon, containing stalls sufficient to appropriate one to each regular contributor of produce, and fix one definite day each month for holding the fair, there is little doubt but it would be well attended; especially if the farmers, for whose particular benefit these fairs were started, will bring forward as much of their produce as possible, including vegetables, butter, eggs, &c., as well as cattle, swine, &c. New-York dealers would then soon find their way to these fairs." We need scarcely express the hope, once more, that this enterprise may be persisted in by the Bedford Farmers' Club, until the question of holding "Market Fairs" is more fairly tested than it has ever yet been in this country.

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ALSYKE CLOVER.—Under the head *Varieties of Clover*, in your last no., it is stated that the Alsyke has proved itself to lack hardiness for the climate of Scotland, and the cultivation of it in this country is discouraged. This variety was originated in the cold climate of Sweden, and has been successfully grown in northern Germany and in Canada. I have raised it in Greenfield, Mass., and have a beautiful patch of nearly an acre in southern Ohio. Those largely interested in its culture, say that it is not so likely to be winter killed as red clover, and prefer it both for pasture and fodder, to any other clover. This testimony comes from those who do not seem to know that the blossoms, which are accessible to the honey bee, abound in delicious honey. L. L. LANGSTROTH.

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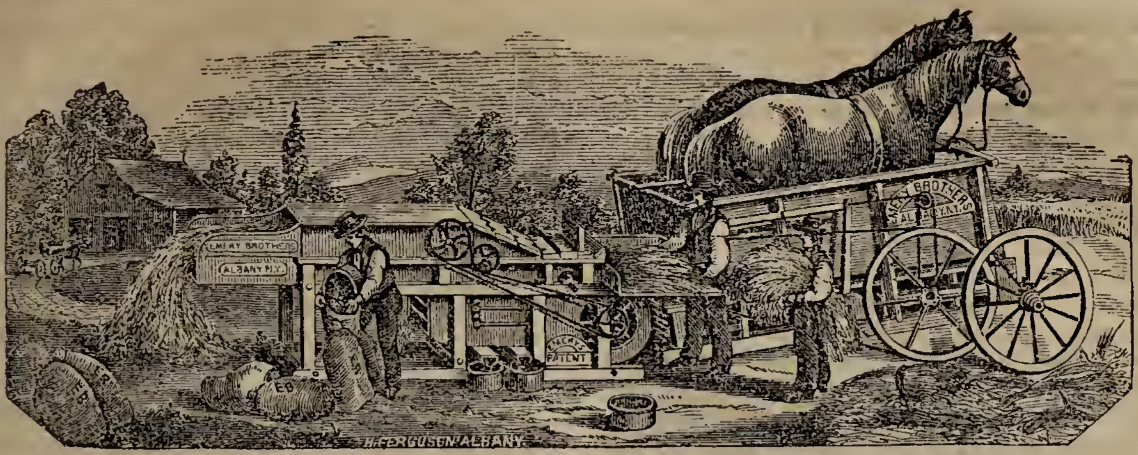
☞ Messrs. HARE & Co., Draughtsmen and Engravers on Wood, 31 Essex St., Strand, London, send us samples of their printing in colors, from wood blocks, showing very superior execution and effect, either in engravings of machinery or for other purposes. They give especial attention to illustrations of Agricultural Implements and Machinery, and for this purpose propose to occupy a stand at the Royal Society's Show.



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EMERY BROTHERS,

Proprietors,

No. 62 & 64 STATE-STREET

ALBANY, N. Y.,

PATENTEES AND MANUFACTURERS OF

EMERY'S PATENT CHANGEABLE RAILROAD HORSE POWER.

ALSO LEVER POWERS,

For Four, Six and Eight Horses, of new and superior construction, together with a great variety of labor saving

AGRICULTURAL MACHINERY,

ALSO

GENERAL DEALERS IN IMPLEMENTS AND SEEDS.

HORSE POWERS.

IT has ever been the aim of the proprietors to make none but the first class of work, and always use the best materials and workmanship. In the construction of their Horse Powers they have endeavored to adapt them most readily and advantageously to the great variety of purposes, required by the Farmer and Mechanic. The same considerations have guided them in the construction and adaptation of the various Machines made and sold by them, and to be driven by the power, in calculating their various velocities, forces, pulleys and geers required to enable them to operate to their maximum efficiency, which is the great secret of their success.

THRASHING MACHINES

WITH

SEPARATING AND CLEANING ATTACHMENT,

Combined and adapted for all kinds and conditions of grain, &c.

This machine is the greatest success in its line yet produced. It can be operated with two horses as easily, and with equal results, as the ordinary thrashing machine without the cleaning attachment; while its capacity adapts it equally well to the force of four or six horses.

It will thresh perfectly clean from the straw, and clean the grain for market without any wastage in any part of the process.

It is complete in one frame. Very compact and simple—runs light, still, and without any concussion from its moving parts. It has been very extensively used during the past two harvests, and its superiority over any others in market established beyond question, and considering its capacity and cost of construction it is at least fifty per cent. cheaper than any other similar machine in use.

CLOVER MILLS AND CLEANERS.

This is a new Machine comparatively, and is believed to be one of the best Machines for the purpose ever made; can be driven by one, two, or more horses at a high or slow velocity, and do equally good work, and with wet and bad, as well as good condition, of the clover chaff. It cleans the seed and delivers it fit for market at the same operation.

STALK AND STRAW CUTTERS

For Horse Power—a strong and durable Machine, and adjustable to any length of cut.

SAWING MILLS,

With Circular Saws for Cutting Fire-wood, Slitting Boards, Plank, &c., for fencing and building purposes; also with Machine Cross-cut for cutting Logs for Wood, Shingles, Staves, &c.; also Mills for making Shingles.

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For Grinding all kinds of Grain for Feeding, as well as corn in the ear when desired. Several sizes, and with or without Sieves and Bolts attached.

CIDER MILLS,

For Power and Hand use, with and without Press attached. These Mills and Presses are of a superior style and utility to any others in use.

COTTON GINS,

WITH

COTTON LINT CLEANER AND CONDENSER.

Cotton Gins with Improved feeding hoppers, with 30 to 100 Saws, calculated for one to eight horses. These are superior in finish and adaptation to the wants of the Cotton Grower, to anything of the kind before offered to the public.

THE LINT CONDENSER

Is an attachment suited to any ordinary Cotton Gin; it receives the lint as it is discharged from the gin, condenses it and delivers it compact, ready for the press at one and the same operation, and at the same operation cleanses it from all earthy matter, as sand, dust, &c. It dispenses with the necessity of any lint room and large buildings, as the Gin may be equally as advantageously used in the field as the grain thrasher, and when used in buildings it requires no more additional room than the size of the gin itself occupies. It is also a perfect safeguard against fire, as it is impossible for burning lint to pass through the machine without the fire being extinguished in its passage, thus making this Cotton Gin with its condenser, fire-proof. They have been extensively used in Georgia the past two crops, and the cotton made by them has commanded an advanced price over that ginned by the best machines in use.

AGRICULTURAL IMPLEMENTS,

constantly on hand, embracing a large and selected assortment of Plows, Harrows, Cultivators, Dog Powers, Churns, Cheese Presses; also Forks, Hoes, Shovels, &c., always on hand at the lowest manufacturers' terms.

ILLUMINATED CATALOGUE

The Proprietors have completed their new Catalogue the most complete and beautifully illustrated work ever published by any manufacturer, embracing a great number and variety of finely executed and carefully prepared

ILLUSTRATIONS AND DESCRIPTIONS,

together with ample references and indexes as well as the Prices, Terms of Sale, Weight, Cubic Measurements, Capacity, Directions for use, Durability and Warranty of their

MACHINERY, IMPLEMENTS AND SEEDS.

On receipt of three cents in stamps to prepay postage, it will be sent to all applicants. Local Agencies solicited for the sale of the above Machines.

EMERY BROTHERS,
No. 62 & 64 State Street, Albany, N. Y

May 9—w&m2t.

SEND FOR AN ILLUSTRATED CIRCULAR

OF

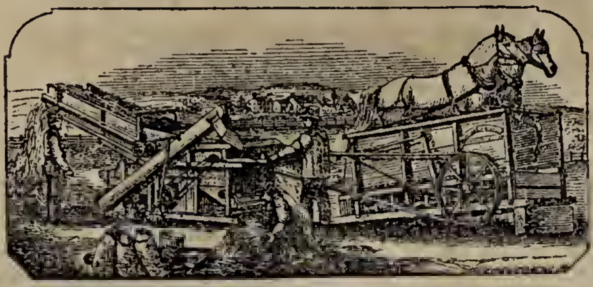
HORSE POWERS, THRESHING MACHINES, &c.

MANUFACTURED BY

G. WESTINGHOUSE & CO.,

AT THE

SCHENECTADY AGRICULTURAL WORKS.



These machines are not surpassed by any in the country, and farmers or others intending to purchase will do well to give them an examination.

Circulars having cuts, descriptions and prices will be sent free to all applicants. Address G. WESTINGHOUSE & CO,
April 16—weow4t. Schenectady, N, Y.

COE'S SUPERPHOSPHATE OF LIME.—

The subscriber has the above article genuine, and is prepared to furnish it in bags of 125 pounds, or by the ton from one to ten. Terms made known on application.

☞ Circulars sent ratis. WM. THORBURN, Seedsman,
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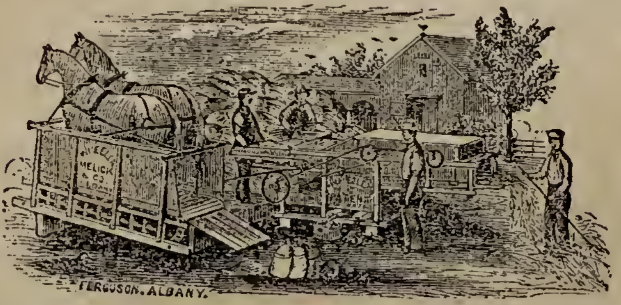
I offer for sale two Duke of Oxford BULL CALVES, one of them got by the "Duke of Gloster," (11382,) the other by imported "Grand Duke of Oxford," (16184.)

Also several well bred Bull and Heifer Calves by the same sire. I have also a few

JERSEY OR ALDERNEY

Cows and Heifers for sale. JAMES O. SHELDON,
Jan. 24—w&mtf. White Spring Farm, Geneva, N. Y.

NEW-YORK STATE AGRICULTURAL WORKS.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WHEELER, MELICK & CO., Proprietors, Albany.

Manufacture Wheeler's Patent Railway Chain

HORSE POWERS,

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PLANTATION HORSE POWERS,

(four horse or six mule levers.)

Wheeler's (improved) Patent Combined

THRESHER AND WINNOWER,

(No. 1, 30 inch, and No. 2, 26 inch Cylinders.)

OVERSHOT THRESHER AND SEPARATOR,

and other FARMING MACHINES for Horse Power use.

The subscribers are inventors of all the above machines, and give their entire attention to the manufacture of them, and having had the longest and largest experience of any firm in this business, feel warranted in saying that THEIR MACHINES ARE UNEQUALLED. They call especial attention to their

IMPROVED THRESHER AND WINNOWER,

of which over 400 were sold in 1860, satisfying all purchasers of their superiority and economy for threshing, separating and winnowing at one operation.

CIRCULARS containing list of PRICES and full DESCRIPTIONS and CUTS of each MACHINE, with statements of their capacity for work, will, on application, be sent by mail, postage free.

☞ Liberal discounts are made to Dealers. Responsible Agents wanted in sections where we have none. Address
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☞ LOOK TO YOUR GARDENS. ☜

FRANK G. JOHNSON'S PATENT ATTENUATED COAL TAR!

IN THE FORM OF A

DRY POWDER,

FOR EXTERMINATING

INSECTS & VERMIN IN FIELD & GARDEN.

Patented March 27, and December 18, 1860.

IT WILL SAVE YOUR VINES.
IT WILL SAVE YOUR PLANTS.
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IT WILL SAVE YOUR POTATOES.
IT WILL SAVE YOUR CABBAGES.
IT WILL SAVE YOUR WHEAT.
IT WILL SAVE YOUR FRUIT.
IT WILL SAVE YOUR ROSE BUSHES.
IT WILL SAVE YOUR COTTON.
IT WILL SAVE YOUR TOBACCO.
IT WILL SAVE EVERY PRODUCT OF FIELD AND GARDEN.

from the ravages of every variety of INSECTS AND VERMIN. For sale by WM. THORBURN, Sole Agent for Albany,
Circulars gratis. 490 and 492 Broadway, Albany, N. Y.

PRICE—25 cents per pound—3 pounds, 50 cents—8 pounds, $1. A farther reduction if a very large quantity is required.
May 2—w3tm1t.

LANDSCAPE GARDENING AND RURAL ARCHITECTURE—Landscape, Agricultural and Civil Engineering, Surveying, Leveling and Draughting.

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Architect, Civil Engineer & Draughtsman,

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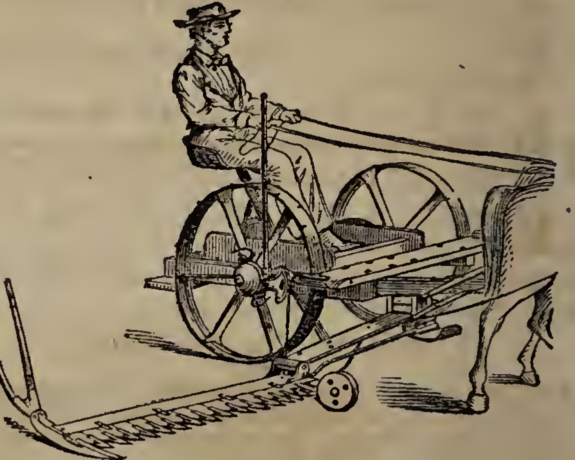
Country Seats, Parks, Rural Cemeteries, and public and private roads, laid out and superintended. Plans, Elevations and Working Drawings for Buildings in all departments of Rural Architecture, prepared and mailed to any section of the country. Consultations gratuitous, personally or by letter, March 21—w&mtf.

FIRST PREMIUM AS BEST MOWER

AWARDED BY

N. Y. STATE AGRICULTURAL SOCIETY

At Elmira, October, 1860.



AS IT APPEARS IN THE FIELD.

BUCKEYE MOWER

WITH FLEXIBLE FOLDING-BAR.

The unprecedented success of this machine is a convincing proof of its excellence. It has never failed, wherever introduced, to take precedence over all other Mowers, and the important principles COVERED BY ITS PATENTS are now universally conceded to be indispensable to a

PERFECT MOWER.

The following STATE AGRICULTURAL SOCIETIES awarded First Premiums to the BUCKEYE in 1860, New-York, Pennsylvania, Maryland, Virginia, Indiana, Tennessee. (FIELD TRIAL; two First Premiums, as MOWER, and as COMBINED MACHINE,) Kentucky, (three First Premiums as MOWER, REAPER, and COMBINED MACHINE.) The farmer who contemplates purchasing a mower for the harvest of 1861 will, in selecting the Buckeye, secure the only machine which

COMBINES ALL THE REQUISITES

of a perfect Mower, including strength, durability, simplicity, lightness of draft, freedom from side-draft, portability, convenience, perfect adaptation to uneven surface, ease in backing, safety and comfort to the driver, ease to the team, and capability of doing

GOOD WORK ON ANY DESCRIPTION OF LAND,

and in any variety or condition of grass.

Farmers wishing to avoid disappointment will give their orders early in the season.

Circulars, with full description and testimonials, forwarded by mail.
JOHN P. ADRIANCE, Manufacturer and Proprietor,
Po'keepsie, N. Y.
Sole Warehouse in New-York, 165 Greenwich-st., near Courtlandt-st.
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STEEL PLOWS

We are now manufacturing a superior **Steel Plow**, intended for general use. Some of the advantages it possesses over the cast iron plow, are lightness of draught, durability, and freedom from clogging or sticking in heavy, clayey sticky or tenacious soils. The parts most exposed to wear are so constructed that they may be readily repaired by any blacksmith.

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"Mohawk Valley Clipper," No. 1, full trimmed, all steel,..	$15.00
do. do. with cast point,..................	14.00
"Empire," No. 1, with cast point, full trimmed,............	15.00
For Three-Horse Plows,......................	$1.50 extra.
For Adjustable Beams, ...	1.00 do.

We also manufacture Sayre & Klink's Patent Tubular Shank

STEEL CULTIVATOR TEETH.

These Teeth are intended to supersede the old style of wedge teeth and teeth with cast iron heads. They are not liable to become LOOSE in the frame, like the FORMER, nor to BREAK, like the LATTER. They are as readily attached to the frame as any form of tooth.

SAYRES' PATENT HORSE HOE.

This implement is considered to be superior to any other for cultivating Corn, Cotton, Tobacco, Potatoes, Hops, Broom Corn, Nurseries, and all crops planted in rows or drills.

Steel Shovel Blades and Cultivator Points made, and all kinds of Swaging and Plow work done to order.

☞ SEND FOR A CIRCULAR. ☜

REMINGTONS, MARKHAM & CO.,
E. Remington & Sons, } Ilion, Herkimer Co., N. Y.
Benjamin P. Markham, }
Geo. Tuckerman. } March 21—w&mtf.

EXTRACT OF TOBACCO.—

For dipping Sheep and Lambs, and for destroying all kinds of Vermin on other animals.

The manufacturers of this new and valuable preparation, beg leave to call the attention of Farmers and Graziers to this effectual remedy for destroying Ticks, Lice, and all other insects injurious to animals and vegetation, and preventing the alarming attacks of the Fly and Scab on Sheep.

Its use not only removes the vermin on animals but cleanses and purifies the skin, thereby materially benefitting their general health, and greatly improving wool, both in quality and quantity.

This article completely supersedes that LABORIOUS and DISAGREEABLE work of preparation in your own buildings for sheep-washing, as it is ready at all times, in any climate, and for all descriptions of Sheep, even for Ewes in lamb, and can be furnished at a reduced cost.

FISHER & CO., Sole Agents.
March 14—w&m3mos. 23 Central Wharf, Boston.

BERKSHIRE SWINE,

of unmixed breed, from different litters, at low prices, for sale.

Feb. 7.—w&mtf. WM. J. PETTEE, Lakeville, Conn

IMPORTED DEVON BULL FOR SALE.

The subscriber offers for sale his imported North Devon Bull OMER PASHA (513.) He is seven years old, perfectly healthy, in fine condition, and a sure getter. Received the 1st prize as a yearling, at the Show of the Royal Agricultural Society of England. Price $800. Also a number of

Young Bulls, Cows, and Heifers,

At greatly reduced prices, to suit the times.

C. S. WAINWRIGHT.
April 18—w3tm2t. The Meadows, Rhinebeck, N. Y.

PORTABLE SAW MILLS.—

Capable of sawing one to two thousand feet of boards per day, according to the amount of steam or water-power applied. Price, $300.

HORSE POWERS,

Suitable for driving the above with two to six horses—$100.

PORTABLE STEAM ENGINES

For the above, from $300 to $800, according to size.

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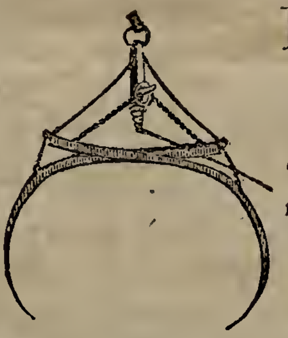

BEARDSLEY'S

HAY ELEVATOR

OR

Horse Power Fork,

Can be used by one or two horses.

Price, including three pulleys and 60 feet of rope, $12.

Liberal discount to dealers.

Rights for sale.

Send for a Circular.

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South Edmeston.
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I. T. GRANT & CO., PATENT GRAIN CRADLE.

They are so improved as to be taken down and packed in boxes for transportation. One dozen can be packed in a box of about six cubic feet. We also make the Grapevine Cradle. All of the above are made of the best material and workmanship. For Price List, address

I. T. GRANT & CO.,
May 1—m12t Junction, Rensselaer Co., N. Y.

I. T. GRANT'S PATENT DOUBLE BLAST FAN MILLS.

They will chaff and screen wheat in passing through the mill once, in the most perfect manner, and all kinds of grain and seed. Warranted the very best in use.

Patent Rights for sale of all the Western States.

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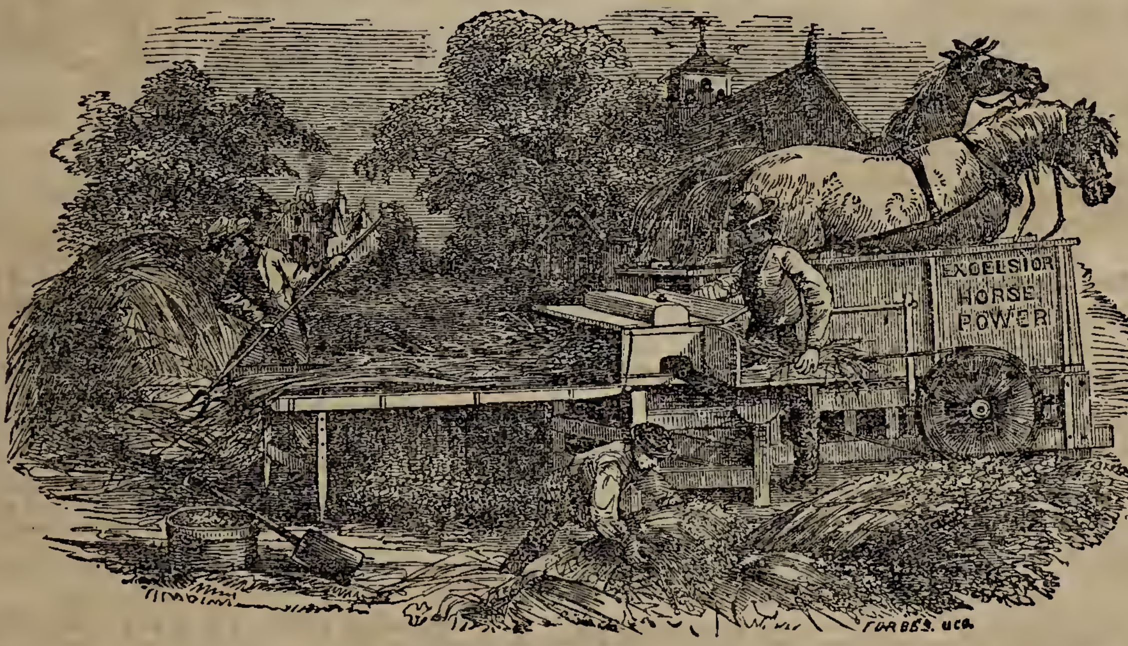
ALBANY, N. Y.,



CHARLES E. PEASE, Proprietor.

Endless Chain Horse Powers, Threshers and Cleaners, Threshers and Separators, Saw Mills and Saws Dog Powers and Clover Hullers, Shares' Patent Coulter Harrows and Hilling, Hoeing & Potato Covering Machines, &c.

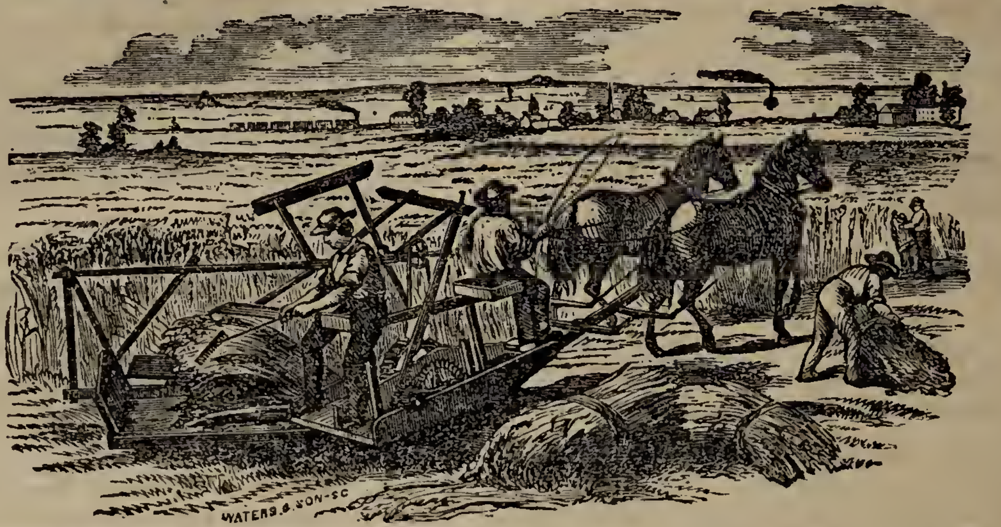
Having been engaged in the manufacture of the above machines for several years and by personal superintendence to their getting up, I am enabled to guarantee each to be perfect of its kind, and will WARRANT them to give satisfaction.

Letters of inquiry will be promptly replied to, and liberal inducements will be offered to the trade.

CHAS. E. PEASE,
April 21—weow2tm2t* 84 State-st., Albany, N. Y.

HOMES FOR THE INDUSTRIOUS

IN THE GARDEN STATE OF THE WEST.



THE ILLINOIS CENTRAL RAILROAD CO., HAVE FOR SALE

1,200,000 ACRES OF RICH FARMING LANDS,

In Tracts of Forty Acres and upward on Long Credit and at Low Prices.

THE attention of the enterprising and industrious portion of the community is directed to the following statements and liberal inducements offered them by the

ILLINOIS CENTRAL RAILROAD COMPANY.

which, as they will perceive, will enable them, by proper energy, perseverance and industry, to provide comfortable homes for themselves and families, with, comparatively speaking, very little capital.

LANDS OF ILLINOIS.

No State in the Valley of the Mississippi offers so great an inducement to the settler as the State of Illinois. There is no portion of the world where all the conditions of climate and soil so admirably combine to produce those two great staples, CORN and WHEAT, as the Prairies of Illinois.

EASTERN AND SOUTHERN MARKETS.

These lands are contiguous to a railroad 700 miles in length, which connects with other roads and navigable lakes and rivers, thus affording an unbroken communication with the Eastern and Southern markets.

RAILROAD SYSTEM OF ILLINOIS.

Over $100,000,000 of private capital have been expended on the railroad system of Illinois. Inasmuch as part of the income from several of these works, with a valuable public fund in lands, go to diminish the State expenses; the TAXES ARE LIGHT, and must consequently every day decrease.

THE STATE DEBT.

The State debt is only $10,106,398 14, *and within the last three years has been reduced* $2,959,746 80, *and we may reasonably expect that in ten years it will become extinct.*

PRESENT POPULATION.

The State is rapidly filling up with population; 868,025 persons having been added since 1850, making the present population 1,723,663, a ratio of 102 per cent. in ten years.

AGRICULTURAL PRODUCTS.

The Agricultural Products of Illinois are greater than those of any other State. The products sent out during the past year exceeded 1,500,000 tons. The wheat crop of 1860 approaches 35,000,000 bushels, while the corn crop yields not less than 140,000,000 bushels.

FERTILITY OF THE SOIL.

Nowhere can the industrious farmer secure such immediate results for his labor as upon these prairie soils, they being composed of a deep rich loam, the fertility of which is unsurpassed by any on the globe.

TO ACTUAL CULTIVATORS.

Since 1854 *the Company have sold* 1,300,000 *acres. They sell only to actual cultivators, and every contract contains an agreement to cultivate. The road has been constructed through these lands at an expense of* $30,000,000. *In* 1850 *the population of forty-nine counties, through which it passes, was only* 335,598 *since which* 479,293 *have been added; making the whole population* 814,891, *a gain of* 143 *per cent.*

EVIDENCES OF PROSPERITY.

As an evidence of the thrift of the people, it may be stated that 600,000 tons of freight, including 8,600,000 bushels of grain, and 250,000 barrels of flour were forwarded over the line last year.

PRICES AND TERMS OF PAYMENT.

The prices of these lands vary from $6 to $25 per acre, according to location, quality, &c. First class farming lands sell for about $10 to $12 per acre; and the relative expense of subduing prairie land as compared with wood land is in the ratio of 1 to 10 in favor of the former. The terms of sale for the bulk of these lands will be

ONE YEAR'S INTEREST IN ADVANCE,

at six per cent per annum, and six interest notes at six per cent., payable respectively in one, two, three, four, five and six years from date of sale; and four notes for principal, payable in four, five, six and seven years from date of sale; the contract stipulating that one-tenth of the tract purchased shall be fenced and cultivated, each and every year, for five years from date of sale, so that at the end of five years one-half shall be fenced and under cultivation.

TWENTY PER CENT. WILL BE DEDUCTED

from the valuation for cash, except the same should be at six dollars per acre, when the cash price will be five dollars.

Pamphlets descriptive of the lands, soil, climate, productions, prices, and terms of payment, can be had on application to

J. W. FOSTER, Land Commissioner,
CHICAGO, ILLINOIS.

For the name of the Towns, Villages and Cities situated upon the Illinois Central Railroad, see pages 188, 189 and 190 Appleton's Railway Guide.

THE CULTIVATOR

THIRD] TO IMPROVE THE SOIL AND THE MIND. [SERIES.

VOL. IX. ALBANY, N. Y., JULY, 1861. No. 7.

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EDITORS AND PROPRIETORS, 395 BROADWAY, ALBANY, N. Y.

J. J. THOMAS, ASSOCIATE EDITOR, UNION SPRINGS, N. Y.

TERMS—FIFTY CENTS A YEAR.—Ten copies of the CULTIVATOR and Ten of the ANNUAL REGISTER OF RURAL AFFAIRS, with one of each free to the Agent, Five Dollars.

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Farming Operations made Profitable.

In the COUNTRY GENTLEMAN of the 16th inst. we presented a summary of several excellent articles under the foregoing title, contributed for the New-England Farmer by Hon. FRED. HOLBROOK; the third and last of the series has since appeared, and as we have scarcely the space to copy it at length, we will endeavor to give our readers the benefit of its most important points.

VII. Making a Productive Pasture.

The question being to convert 30 or 40 acres, somewhat uneven, but sufficiently level for plowing, into a good pasture after it has been impoverished by occasional grain crops and over-crowding with stock when not under grain, Mr. H. recommends as follows:—

1. Plow in August, say "about eight inches deep, so as to stir in a portion of the fresh subsoil with the old surface soil. Then sow broadcast 500 lbs. of bone-dust per acre, harrow it in, and seed at once," putting in herd's grass (timothy) and red top, or orchard grass if preferred. Timothy, when fed close, is likely to die out. Red top, when sown, should be put "on separately, and with a much narrower cast," owing to its lightness. Orchard grass is a favorite with Mr. H., and, "the seed being quite bulky, a bushel and a half is none too much to sow with the other grasses, if you would secure a thick fine sward." Or,

2. "After plowing in August, you can, if you please, put on a heavier dressing of bone, say 300 lbs., per acre, and sow winter wheat or rye with the grass seeds—the extra dressing of bone in that case compensating the land for a grain crop taken off. If the season is favorable for winter grain, you can get from twenty to thirty bushels per acre and several dollars' worth of straw, besides decidedly improving the land."

3. In either case, as soon as the ground is sufficiently bare of the old snow, the following spring, and while the surface is filled with little cracks, sow liberally red and white clover seeds.

4. Another mode of improving the land is to plow it nine or ten inches deep, late in the fall, and in spring manure liberally with compost, broadcast, and then plant it with corn or potatoes. If time permits, after harvest in the fall, plow, harrow, and prepare the land all ready for stocking down, and very early in the spring sow on grass seed alone. Or plow in the spring and stock to grass with grain. "It would, of course, be better for the land to omit a grain crop; but if present profits must be considered, then take the crop of grain, and you have still an improved pasture."

5. The following modes are also suggested—either to manure the land one or two years in the hill, as it is called, planting it with potatoes, and then lay it down to grass

in the spring, without grain, sowing 500 pounds of bone dust per acre, and harrowing it in before sowing the grass seed; or, after planting the land a year, to rot the sod, sow 300 pounds of guano per acre, with a thick seeding of clover, to be the next year turned under as a green crop, and the land in August, or the first part of September, seeded down to pasture.

6. "If the land is quite foul with any species of vegetation that it is difficult to kill by simply the smothering process of plowing, then it would be well to plant and cultivate it in hoed crops one year before laying it to permanent pasture. But as a general thing nicely executed plowing will pretty much kill out the old vegetation. Thorough plowing should be the rule, and if a baulk perchance is made, the team should be at once backed into it and the defective furrow mended. Nothing at all can be gained by the 'cut and cover' style of plowing."

All these various modes of improving old pastures necessitate the investment of some capital, but Mr. H. justly adds that "such investment is indispensable if you would have good land, and *is usually more profitable than the purchase of more land to meet the requirements of the stock you wish to keep.*"

VIII. The Use of Guano.

"Guano stimulates land in some cases wonderfully for one or two years after its application, but it does not seem to add staple to the soil, nor to be sufficiently permanent in its influence to be relied on as a sole fertilizer. It may, however, be used beneficially for some special purposes. For instance, on a loose, dry, sandy or gravelly soil, loth to take grass well, even though well manured for a previous crop, or on other land which for any reason is shy and uncertain in this regard, a superb catch of grass may generally be obtained by sowing 200 to 300 pounds of guano per acre, and harrowing it in with grain sowed at the time of stocking to grass. The crop of grain and of straw may also be considerably increased thereby. I have thought in my own practice that such application of guano paid as well as any other of like cost that could have been made. I have already stated that guano may in some cases be profitably applied to stimulate poor land to throw up a bulky green crop, to be turned back into the soil. Instances might be named where its application for this purpose has been attended with satisfactory results."

IX. Draining a Wet Meadow.

Surface water can often be drained away where there is no perceptible descent to the eye, and the fact that the drains must sometimes pass through a swell of land higher than the general surface of the meadow, to reach an outlet, should not prevent the undertaking.

1. The eye cannot be trusted. "Take an accurate survey of the meadow with leveling instruments, and ascertain where one or two main open ditches can be cut and have a suitable regularity of fall or draught to carry off flood waters with the falling of the stream. The fewer ditches you can have, and yet get rid of the water, the more convenient will be the after tillage of the land."

2. In digging these ditches it is convenient to use models of light scantling or lath, "of the right width for the bottom of the ditch, and the sides of them flaring out at an angle of forty-five degrees;" the workman should try his work by such a model from time to time, in order to regulate the width of the ditch at the top, according to its depth, for that will vary with every inequality of surface when the bottom is kept at a certain regulated grade of descent. The earth taken out, may perhaps be valuable for the compost heap, or for leveling up hollows in the meadow surface; and, after plowing, farther attention may be given to cutting off knolls as well as filling depressions.

3. "After completing the ditches, and the land has dried off sufficiently to permit of plowing it, any time in the season previous to about the first week in September, plow as much of it as you can at one time manage. I should think certainly as much as nine or ten inches deep, so as to bury the old sod thoroughly, and kill its roots. Perhaps it would be still better to plow a foot deep. Be particular in plowing to get the old swampy vegetation all under, lest otherwise it should grow up again, to the injury of the new seeding."

4. The sod and subsoil plow will make the best tillage, provided the sod is not too rooty and stubborn to allow of the use of the little skim or leading plow. If the sod is too much for the skim plow to contend with successfully, then a large powerful breaking-up plow of the flat furrow sod kind, drawn by four or six oxen, will be best.

5. The meadow should be seeded after the application of "15 or 20 loads of compost per acre, made of manure and good upland loam," and harrowed in,—if possible "as early as the first half of August, or even in July, if it can then be attended to, for that will give the young grass time to get firmly rooted before the winter or spring floods come on, so that it will not be likely to be killed by the overflow." Mr. H. recommends "a half bushel of herds grass and a bushel of red-top seeds per acre," covered with a brush or light roller, although if fowl-meadow grass can be procured, he thinks a bushel and a half of this seed preferable for such a location, as rather benefitted than otherwise by an occasional flooding; "it delights in a moist but not wet soil, and yields a very thick and heavy swath, and superb quality of hay, and is very lasting in the land, provided it is not cut too early."

Such a drainage and stocking down under cultivated grasses, together with occasional future top-dressings of compost, "will doubtless make the meadow very valuable grass land."

X. Plowing and Seeding Bog-Meadow.

In the case of a real bog-meadow already drained, on which it is desired to supersede the wild grasses with cultivated ones, an August plowing is recommended, eight or ten inches deep—not always an easy task:—

"You can do nothing at all effective and satisfactory towards the subjugation of your meadow, with a common green sward plow. The bog-meadow plow is rigged with a wide steel edged share, having a sharp cutting edge, and kept so during use by frequent applications of a file, so as to cut the wild grass roots completely, to the extent of the entire width of the furrow-slice, and thus permit it to turn over surely. You cannot turn the boggy sward unless its roots are severed on the under side of the furrow-slice; if a portion of them are left uncut, they will pull the slice back into its original place again in spite of you. The best modern plows for such land, have a circular cutter of steel, attached by its axle to a shank or stem of wrought iron, which is clasped to the plow-beam in the same place and manner as a common cutter; and the circular plate of steel, revolving like the wheel at the end of the beam, makes a clean, effective incision, cutting the slice surely from the main land, and rendering it impossible for the sod to peel and roll up in large masses, as it is wont to do before a common cutter, because the revolutions of the circular cutter naturally hold the turf down in its place while being cut. The bog plow has a large side wheel to guage the depth of furrow, and having a wide rim to prevent it from rutting into the spongy sod. Then, too, the plow has a draft rod of iron, passing through a clevis on the end of the beam, of such construction as to admit of very wide variations in the landing of the plow, so that the point of draft, where the chain or evener is hitched to the plow, may be swung to the left, or land-ward side of the beam, as much as twelve inches, or any distance less than that which the particular case may demand. Thus the entire team may be allowed to walk upon the sod or unbroken land—the off oxen or horses, travelling in about the place the near ones would, if the team were attached to the plow by the common hitch. This line of draft may be so nicely adjusted, that while the off oxen travel on the unbroken sod, the plow will nevertheless run perfectly true and natural in its work. It is an arrangement quite essential in plowing deep, mucky meadows, where the off oxen would mire to their bellies if compelled to travel in the soft furrow. I have seen bog-meadows superbly plowed in this way, the plow turning furrows two feet wide, and laying them in side by side so truly, as to completely bury the swamp grass, and present a clean surface for cultivation. In bog-meadow plowing, a very wide furrow-slice will turn more surely and perfectly than a narrower one, provided you have a wide cutting share, because the weight of the wide slice itself helps materially to carry the sod over after the plow has cut it and raised it from its bed."

The land having been plowed may, perhaps, be planted and cultivated a year or two, or at once stocked to grass. In the latter case, if solid enough to permit teams upon it, cart on about 30 loads per acre of one part manure to two parts upland loam, and harrow in the grass seed, as in case of the other meadow alluded to above; or if manure cannot be drawn on at once, a dressing of 500 pounds per acre of guano or superphosphate of lime will "stimulate the grass to take root well, make a vigorous early growth, and choke down wild stuff, and two years afterwards, you could top-dress with a compost of loam and manure," or the compost may be drawn on after the ground is frozen, and the grass seeds then sown.

The method thus prescribed, Mr. H. has known to be very successfully followed in the reclamation of bog meadow. Another but more expensive way, "where bog meadows are too soft and loose in texture to admit of much tillage, or to take to tame grasses well, is to cover them with a coating of an inch or more in thickness of loam or fine gravelly subsoil, carting it on to the meadow when the land is sufficiently frozen to bear up the team. On top of that a dressing of compost manure is spread, and grass seeds are sown on the manure. This coating sweetens and gives body and consistency to the surface soil, and for several years promotes a large growth of the tame grasses."

In either case the drainage must be the primary point attended to; and if with every precaution, after a few years the wild grasses begin to predominate, "the land may need to be plowed and seeded anew. But if the tame grasses hold possession mostly, then an occasional top-dressing of compost will enable the land to give you a good burden and quality of hay."

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NATURE AND ART IN CULTURE.

The Fruit Growers' Association of Eastern Pennsylvania, publishes in its proceedings, a paper from the pen of F. J. Cope, the object of which is to show that the more nearly "nature" is followed, and the more artificial culture is discarded, the more successful will be the results. As he raps every one over the knuckles who comes in his way, from Downing downward, he will doubtless not object to a little criticism.

This writer, as well as others, falls into serious errors in the use of terms, and misapprehends the distinction between nature and art.

The seeds of fruit trees are scattered accidentally along fences, where they grow and produce trees. Such as are tender perish by neglect; the hardy seedlings grow up a confused mass of thorns and brush, commonly denominated "natural growth." They bear "natural fruit," that is, such as is good for nothing, with the exception of one in a thousand or so. The question is—in this growth, impeded by weeds, grass, hard soil, and other adverse causes, does Nature have as full play, as where these retarding causes are removed, and a clean mellow soil is afforded for the free growth of the tree? If she does, then the more any plant or tree is choked down and smothered, the more it grows "according to nature."

This erroneous plea for "nature," would prevent the farmer from growing anything but weeds, which is another name for plants that grow without culture. A field of corn is planted; it is neither plowed nor cultivated, and the weeds envelope the plants, placing them in the same "natural condition" as the seedling fruit trees in the fence corners already spoken of. The farmer, who by manuring and cultivating well, obtains 80 bushels per acre, adopts the "unnatural and artificial mode."

Now, we entirely discard this use of terms and this mode of reasoning. Among the many thousand plants, a dozen or two called weeds, make their own way, and crowd out others, including cultivated plants. These cultivated plants, therefore, cannot grow according to nature, unless these obstructors are removed. In a field of corn, smothered and choked down by weeds, nature cannot have the free course which it has in the well cultivated field, where nothing retards its growth. If the roots cannot penetrate the hard and baked soil, their *natural* extension is impeded, and do not develope themselves as they do in a mellow and fertile soil, where they can obtain a supply of nutriment. In the same way, a tree growing in grass and weeds, attains very imperfectly its natural growth, and lives only because it is one in a hundred that has survived on account of its natural hardiness. The removal by pruning, of crooked, crowding, half dead branches, is as essential to its healthy and natural growth, as the destruction of weeds between the plants of the corn crop. Experience has proved all this to be true in thousands of instances, and it must require a great deal of acute, smart reasoning, to arrive legitimately at a different result. We have heard of a logician, who had such confidence in his arguments, that when told that facts directly contradicted him, exclaimed triumphantly, "so much the worse for your facts—so much the worse for your facts!"

Cultivators are prone to run from one extreme to another. The writer of the article here alluded to, gives a statement of his experiments with high manuring, in order to show that all artificial modes are wrong. He dug holes four feet wide, and two feet deep; filled the hole half full with unmixed rotted manure, earth was placed upon this, and the trees planted. Consequently, they stood over a *solid mass of manure one foot thick.* No wonder that these trees perished. We have known trees killed by a much smaller supply of unmixed manure. After this, he says he procured Downing's book, recommending "bigger holes, and of course more manure," and the next orchard was planted in part "according to Downing," that is, we suppose, with a bed of manure under each tree, more than a foot thick. Most of these trees of course died. Another orchard planted without manure, but top-dressed triennially with barn-yard scrapings, lime, muck, &c., richer treatment than most orchards receive,—succeeds and bears well. But to denounce all artificial culture, as it is termed, that is, cultivation and pruning, from the failure of such wild experiments as the above, is as erroneous in logic as that of the Hibernian, who decided that a feather bed must possess intolerable hardness, because a single feather only on a rock, was as much as he could comfortably endure.

We often hear objections made to the pruning and thorough cultivation of the grape, as being unnatural. Where pruning and culture are omitted, the result is, slow growth, small leaves, and an impenetrable mass of wiry, half dead and living branches; the fruit is small, sour, and ripens late or not at all. When well cultivated and properly pruned, the leaves are of full size, the wood hard and well ripened, the fruit large and fully ripened two or three weeks before the other, into a sweet and rich flavor. The small sour fruit cannot be kept in winter; the juice being watery, easily freezes; or readily evaporating, the fruit withers. The large well matured berries have too rich a juice to freeze easily or to evaporate readily, and may be kept till spring. In which of these has "nature" had the best chance to develope?

There are many excellent suggestions in the article, and some bad practices properly exposed; and but for the error of plunging from one extreme into the other, the article would be highly worthy of commendation. We notice this error, because it is adopted by many fruit raisers of the present day.

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MAKING DRAIN TILE OF CEMENT.

If a substitute could be found for the ordinary tile of burned clay used at present for drainage purposes, which could be employed at less expense, where from lack of either suitable clay for the purpose, or of sufficient demand to warrant the purchase of a machine and the erection of a kiln, drainage is now too formidable an undertaking to be encountered,—the discovery would be a boon of no little importance to many of our farmers. The manufacture of clay tile, in securing good clay and properly tempering it, and the management of the kiln to avoid loss from over-burning and breakage of some, and the under-burning and uselessness of others,—involve more skill and experience than has been commonly supposed; and many who have thought that simply buying a machine and hiring an extra workman or two, would enable them to make their own tile more cheaply than to purchase them and pay for their transportation from a moderate distance, have discovered in the end that the business was one including unexpected risks and more costly *leaks* than the books or their own calculations had laid down.

A late number of the French Journal of Practical Agriculture, (April 20,) contains an article stating that in the Department of Isère drain tile have been successfully made of cement—a sort of cement being found there of great hardness and consistency, and highly valued for building purposes. Some ingenious mechanics at Grenoble contrived a machine for the purpose, which is so simple, and the process itself appears so reasonable, that we have had the illustrations re-engraved for the COUNTRY GENTLEMAN, and present below as full a description as the data at command will permit. With this machine, remarks the writer, "the tile are very rapidly moulded; it is an affair of a quarter of an hour, and we obtain by the process solid tile, the durability of which, so to speak, is quite illimitable."

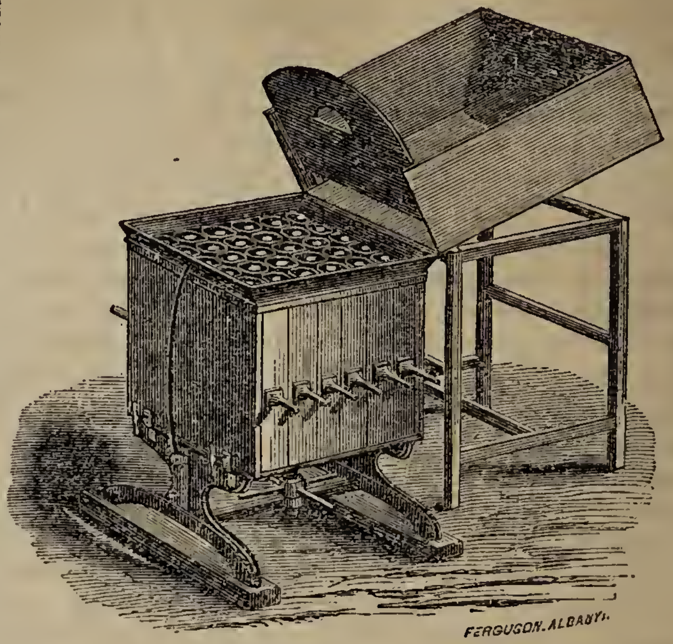
FERGUSON.ALBANY.

Fig. 1.—Moulding Machine for Cement Tile.

In figure 1 is shown a perspective view of the box in which the tile are moulded. They are hexagonal in exterior shape, but cylindrical in bore, as shown in figure 2, which represents a tile partially split open to expose the interior to view. The moulding box may be taken entirely to pieces; the screws shown in fig. 1 are loosened, when the whole side is removable, and the first row of moulds is then exposed, which is taken out by a handle upon each end as shown in the cut—leaving the second row exposed and removable, and so on with the third and all the others.

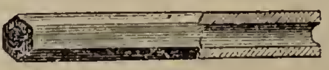

Fig. 2.—Cement Tile.

A wooden cylinder of the proper diameter forms the *core* around which each tile is made. These cores are inserted in holes in the bottom of the moulding box, passing through it, and supported upon a second bottom. This second bottom may be raised or lowered at pleasure by means of the screw with handles, shown in the engraving, underneath the box, so as to regulate exactly the height of the *cores* within it.

To put the apparatus in operation the different series or rows of moulds in succession are put in place, the screws tightened, and the *cores* regulated in their sockets as above, so as not to stand above the level of the moulds. The compartment shown in fig. 1, partially elevated, rests horizontally upon the frame work under it; and here are mixed equal parts of cement and sand, with the proper quantity of water—this operation scarcely requiring five minutes. The slide of the compartment is then raised, and by lifting it a little, its contents are poured into the cavities open to receive them, filling them completely. In ten minutes more the operation is finished. The surface of the moulding box then presents the appearance shown in fig. 3, in which the tops of the tile are represented in the shaded parts. The front of the moulding box is then taken off, as above described, and the different rows of moulds successively withdrawn. Each tile is taken from its mould by sliding it off from the core. Thirty

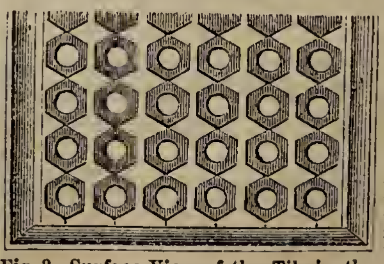

Fig. 3—Surface View of the Tile in the Mould.

tile are thus formed, according to the machine here represented, at one operation. Their length is about thirteen inches.

This method is very expeditious, but requires a kind of cement *which will set rapidly.* Where this can be had cheaply, it promises to be of great service. A commission named by the Agricultural Society of Grenoble to examine the tile thus made, report very favorably with regard to them—pointing out that they possess several advantages over tile of burned clay; they are straighter and more regular at the ends, and their hexagonal form renders them less easily displaced at the bottom of the ditches, and very much easier to lay than pipe tile. They are said to cost 30 francs—less than $6—per 1,000, made upon the spot.

With the aid of a little ingenuity, these engravings will furnish hints by which any good mechanic could construct an apparatus sufficiently complete to try the experiment of the manufacture where cement that promises well is cheaply obtainable. We hope some of our readers will do so, and report the results. There is no fuel to be consumed, and no protracted burning to be watched. The proper degree of consistency at which the cement should be put into the moulds may require some skill and experience, but we can see no reason, when the *right way* of doing the whole thing is once experimentally determined, why any laborer cannot turn out tile complete about as rapidly by this process, as they could be moulded from clay, let alone any subsequent drying and burning. If, according to the article referred to, 30 can be made in one machine in 15 minutes, 1,000 would be a moderate task for it in 10 hours.

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BUYING FARM PRODUCE.

☞ A word with buyers of Farm Produce, Grain, Wool, Butter, &c:—

MAKE MERIT THE MEASURE OF PRICE.

It may seem unnecessary to call special attention to a point which one would naturally suppose must regulate itself, in the Merchant's dealing with the Farmer, as it does in his dealings with his customers. It is too often the case, however, that the necessary discrimination is not shown—through both carelessness and ignorance, perhaps, on the part of agents—and the care taken by the Farmer to secure superior merit goes in great measure unrewarded.

For example. We have known cases in which agents pass through a certain region to buy Butter, with a certain fixed price beyond which they will not or cannot go, of course making the best bargains possible below it, but generally putting it so low that there is little margin left in this direction; while here and there a farmer whose dairy may be worth two or three cents more a pound than any of his neighbors', must take the same rate or lose the opportunity of the sale—at the risk, at least, of considerable expense in marketing it in some other way, if not of missing a seasonable sale altogether. When this butter comes into market, it is the good qualities that pay a profit, while that which is inferior may do no more than return its cost.

So with Wool. The Rural New Yorker states that a wool-buyer had admitted "that some of his agents really paid as much for poor, dirty lots of wool, as for good, clean ones." This same man was complaining bitterly that farmers '"take no pains to have the fleeces clean and nice, and put in all the dirt possible. In fact,' he added, 'I don't believe there is an honest farmer in the State.'' But his whole course was precisely the one to afford the highest premium upon negligence and dishonesty, in discouraging the exercise of scrupulous neatness and an adherance to strict integrity.

The great object in doing a thing *well*, instead of badly, beyond the greater degree of personal satisfaction involved, is to know that its superiority is appreciated by others, and to have evidence of such appreciation in the corresponding price received. While, *in the long run*, skill and the most scrupulous care, are quite sure to have their reward, dealers forget how much they are themselves to blame for the negligence that too commonly exists among farmers. We have frequently remarked—and have never known the remark to be disputed—that those farmers who have succeeded best have been in the almost constant habit of getting a little *above the average price* for whatever they had to sell; but efforts to secure, more generally, the superiority which must thus command superior remuneration, are almost thrown away, when instances occur of the kind noted above. Such instances, even if exceptional, as we would fain hope they now are, make a deeper impression, like the occasional verification of a dream, than hundreds of cases in which the contrary result ensues; when skill goes unrewarded, the disappointment, even if pecuniarily small, touches one's pride, and will go much farther to dishearten him for future exertion than all the Agricultural Journals and Addresses of a year can do to encourage it.

—This lack of measuring the price offered according to the merit of the product purchased, is far more prevalent when that particular product happens to be in brisk demand than at any other time; when prices are low, inferior grades may possibly not sell at all, while *the best are sure to bring something.* With regard to Dairy Products and Wool, which will scarcely continue to maintain hereafter the prices current during the past season, there is therefore the greater urgency resting upon the farmer *to do his best.* And other prices of all sorts will be likely to recede, so that his money, although it may appear to him hard-earned, will be well worth what labor it has cost, go farther than usual, and render him in reality more independent than any other class in the community.

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[For the Country Gentleman and Cultivator.]

SOWING CORN FOR FODDER.

EDITORS CO. GENT.—As it is about the time to sow fodder corn, and there is much diversity of opinion respecting its utility, I will simply state my experience.

I last year plowed up an old lot, that had not been tilled for some years, of five acres, of a light sandy loam, and sowing on but one hundred pounds of Peruvian guano per acre, with one bushel and a half of seed corn, harrowing some four or five times over to get perfectly smooth and pulverize the ground thoroughly. I gathered therefrom eighteen loads of stalks, besides about one hundred bushels of ears of corn. Several head of my cattle were wintered almost entirely upon them; they looked well, and kept as well as any of my neighbors' cattle, who were wintered on English hay, roots, &c., &c. The only "cutter" used was the brawny arm of my man, armed with a broad axe. I consider this the cheapest and best crop for fodder I can grow here. Last year mine was an experiment; this year many of my neighbors, E. J. Platt, Esq., Joshua B. Smith, Jr., and others are about trying it.

Suffolk Co., June 6. JULIUS NICHOLS, M. D.

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☞ Those who complain that none of our Agricultural Publications, emanating from Societies, or issued by private establishments, reach the standard attained, for example, by the *Royal Ag. Society's Journal* in England, may perhaps be ignorant of what *such excellence costs.* We see it stated in one of our latest foreign exchanges, the *Scottish Farmer* of May 15, that the society in question probably expends from $7,500 to $10,000 per year for the contributions published in its *Journal*, editing, &c., &c. It makes an annual volume of about 600 pages.

[For the Country Gentleman and Cultivator.]

SWEDISH TURNIPS.

Editors of Co. Gentleman—I perceive by the queries and other indications in your journal, that the growth of turnips for winter feeding of stock is hitherto but very limited even in the Northern and Eastern States. This appears somewhat strange to a farmer of this locality, although it is quite probable that our geographical position, (with lakes at no great distance on three sides of us,) gives an advantage over many situations in regard to humidity. However this may be, it is quite a rare thing in this neighborhood for a farmer not to raise an acre or two of turnips; while within a few miles, there are quite a number who grow annually six, eight, ten, and in one case, between forty and fifty acres.

The article on the cultivation of ruta bagas, contained in your number of April 25, while generally correct and reliable, differs in some points from the usual practice here; and as "In the multitude of counsellors there is safety," I will state wherein I think the directions given may be improved. There may be somewhat of temerity in presuming to criticise a production so pretentious as the one in question—prefaced too by a motto from Horace; yet in farming as in every thing else, it is the part of wisdom to "Prove all things," and "Hold fast that which is good."

The statement that turnips will do best after potatoes or hoed crops with which manure has been plentifully supplied, may be quite correct; but a judicious farmer will rarely have occasion to prove it, as when his land is brought into the state implied he will take off a crop of wheat or other grain, at the same time seeding with clover, and choose for his turnips a field the condition of which will be improved by a most effective fallow.

The amount of plowing, rolling, &c., described, is doubtless intended for a pretty stiff loam, as on medium soils, (from which fine crops may be obtained,) less work will produce the desired condition; and if the land were at all grassy when plowed in the fall, the plowing in spring should (provided the cultivator will enter freely,) be omitted until preparing for drilling, by which means any rubbish turned in at the first plowing will have time to decay somewhat, while the cultivator and harrow, alternately used, will destroy whatever vegetation may appear.

I have never known the plan of making drills described in the article before me, to be adopted, except when oxen were employed—indeed with a double open furrow, I cannot conceive how the drills are to be only two feet six inches apart, and they should not be more. The method here, which is derived from English and Scotch plowmen, is as follows: Provide a doubletree twice the length you desire to have from centre to centre of your drills; beginning at one side, turn your first furrow towards your land, say four inches deep—go back empty—set your near horse in the furrow made, and if inexperienced, have a measure at first at each end to set your plow by—plow another furrow, making a second half drill—go back empty—set the near horse in the last furrow—plow a third half drill. Now haw round and put the off horse in the first furrow, the plow in the second, the near horse in the third—plow deep enough to make an even-sided drill, and you will complete No. 1; haw round and commence another half drill—when you get to the end proceed as before, and complete No. 2. In this way drills are made which are the pride of the plowman, and it is a great help to a beginner to see an expert hand do the work. After all, the best plan is to invest from $12 to $20 in an expanding double mould-board plow, with a marker, and thereby save half the work.

The recommendation to sow bone dust previous to the last ridging is an excellent one, as by its nourishment the plants are carried rapidly through the season of exposure to the fly, and sustained until their roots reach the manure below. Very good crops may be raised by manuring before ploughing in the fall, and sowing, say 300 lbs. of bone dust per acre, before making the drills. By this plan, the second drilling is saved, the manure is drawn in a season of comparative leisure, and the hauling and spreading it during the heat of summer, which is a toilsome and disagreeable task, is avoided.

The time for sowing here ranges from the first to the twenty fifth of June, and within that time success is affected much by the weather at and after sowing, it being most desirable to sow previous to rain, when the surface is dry.

The plan described for taking up the crop is a good one, but there are advantages in the simple one of pulling by hand and cutting off both main roots and top with a knife or cutter made of a piece of an old scythe. An active workman taking two rows along at once, and throwing them together each way, thereby putting four drills of turnips into a row, will accomplish not far from the same amount of work as by the other plan. The advantages are, all hands, both young and old can be employed—the main roots being cut off, the turnips may be carried in very clean provided they are not hauled when wet—they are laid in the best manner for loading, from both sides, and if you design feeding the tops to cattle they can be left entirely free from earth (an important preventive of scouring), between every two rows of turnips, to be drawn off to a grass field as required.

I may here remark that I can only account for the mention of scraping or washing before slicing by taking into account the roots uncut which hold a great deal of earth, and supposing hauling to be continued when the turnips are wet. I have fed many thousand bushels with most satisfactory results, and scores of thousands are fed every winter around, but nobody thinks of either scraping or washing, as an ordinary thing. This may seem like a trifle but practically it is not so.

There are some objections to piling the turnips in small quantities in different parts of the field, as it might be desirable to plough it in readiness for spring sowing, and the state of the land in winter or early spring might render it almost impossible to get at them when wanted. It is surely better to draw them to a place as near as convenient to the barn (at least at that end of the turnip field), taking care that they are not placed where water ever lodges.

With regard to the mode of storing in the field, having commenced with the small heap, as described, and increased to 1,500 bushels, kept in first rate condition in one continuous pile,—I find that with ventilators at regular intervals of ten feet for a pit six feet wide at bottom, the length of the heap is quite immaterial—also that excavating eight or ten inches has several advantages, and provided the situation be dry will cause no mischief. With these points settled much labor may be saved in several ways. Mark out the pit as long as it will be wanted, and 6 feet wide, with small pickets at each end and in the middle, placed half a furrow's width in from the sides. Then plow the area, turning the furrows outwards, going first carefully in the line of the pickets. The earth can then be shovelled out to each side with great ease.

The covering necessary depends so much on latitude and exposure of situation, that it is useless to specify it. Turnips had better be too cold than too warm; in general with, say six inches of straw, and eight of earth will be quite sufficient, and I think it is questionable whether by compressing the earth it does not become a more rapid conductor of heat—the surface should, however, be smoothed.

There are one or two things further which need attention for the safe keeping of turnips in pits. If you haul them during warm weather, do not cover them up, as you shut in more heat than the ventilators will let out, rather risk a rain or a night frost on them, and endeavor to close them in when the thermometer is not much above freezing. The ventilators to a pit six feet wide should be three or four inches wide, inside diameter. When the weather becomes cold, do not close the ventilators without examining them, and if the vapor is warm enough to keep them from freezing inside, do not close them yet.

If the snow drifts deep over the pit, examine it, as it will sometimes cause a heat which will be ruinous.

Guelph, C. W., May 21, 1861. S.

[For the Country Gentleman and Cultivator.]

WHEAT AFTER OATS OR CLOVER.

Messrs. Editors—Permit me to have a short talk with H., Co. Gent., page 77, last vol., in relation to sowing wheat after oats. H. says, "unless circumstances render it strongly advisable to sow after spring crops, we should give wheat the full benefit of a clover lay, either summer fallowed or turning under the growth when half ripened in summer." This being the case, I would like to ask him why not sow clover seed with the oats, and if the seed took well, another year either plow under the crop, and make a short summer fallow, or, if the land is strong enough, take off a crop of early hay, and let the clover start up a few inches, and then turn it under and prepare for wheat?" If the clover seed failed, he would yet have a chance to sow the oat stubble to wheat. As to seeding on a spring crop, perhaps the best and most profitable crop to sow on corn stubble, and seed to clover with, in this vicinity, at present, is China Tea spring wheat, which has been raised more or less for the last three years, and, so far as I know, given good satisfaction. When well put in on such fields as H. proposes to sow to oats, the yield is often, and I believe generally, from 20 to 30 bushels per acre.

But to return to the main question. Not the only, nor perhaps the principal reason why I propose to seed to clover before sowing wheat, is the general opinion that wheat seldom does well after oats, though from observation and experience I am inclined to believe it is so, and I am also inclined to think that as oats come off rather late to prepare the ground for wheat, making it less likely to be put in in good season, and the oats that will be sure to come up with the wheat, will be yet more likely to prevent the wheat from getting a sufficient start to stand the winter and spring well, or be early enough to escape the midge. But leaving this out of the question, as before stated, one of the principal reasons why I would seed to clover is the benefit the crop is, or may be made to the land. I have found that I received a great deal more benefit to the land from clover when it is plowed up after laying one or two years, while the plant is yet in full vigor, and the ground full of clover roots, than when it is left three or four years, and the clover nearly all run out. This I had found to be the case several times before, but never so much nor so decided a benefit as on an eight acre lot that I planted to corn and potatoes last season. This lot, which was not in what can be called a high state of cultivation, had been in clover two years. The first year cut for hay, and the second crop saved for seed; the second year mowed, and pastured the rest of the season. Last spring there was nothing allowed to run on the lot, so that when we came to plow for corn, which we do immediately before planting, the clover had started up several inches, being what would be called good feed. It was plowed between 7 and 8 inches deep, the poorest part of the lot manured, and the corn had a dressing of plaster and ashes. Part of the field was badly infested with grubs and cut worms, so much so that between three and four days were spent in killing grubs and planting over corn. Yet we had on the seven acres planted to corn about 125 bushels of ears per acre, a considerable part of which I am satisfied was due to the clover.

These facts, together with the discussion in the Co. Gent. during the last few months in relation to improving land with clover, as well as some investigations induced by them, have so strongly impressed my mind with the value of clover as a fertilizer, and especially with filling the ground with a large mass of clover roots, to plow in as often as convenient, that I have felt strongly inclined to try a course or rotation of crops something like the following, to wit: Plow under a good clover sod for corn; sow to some spring crop after the corn, and seed to clover. The third year, if the land is not in good condition, plow under a good crop of clover, summer fallow and sow to wheat; if the land is rich, mow the first crop early, and let the second get something of a start, and then plow under and prepare and sow to wheat. Fourth year, wheat seeded to clover. Fifth and sixth years to be used for hay and clover seed, or pasture, as may be desired. This would enable me to not only keep the land in clover half of the time, but by plowing up the clover while in full vigor, and the ground full of roots, I could plow in two, more or less, good crops of clover in each rotation, which, together with what manure I would be able to make, I believe would improve my land faster than any other profitable course I am acquainted with. Being, it seems to me, a good way to combine the advantages of manuring with barnyard manure and clover.

A good many reasons might be given in favor of manuring with clover besides those already given in the discussions on that subject, and especially in relation to the value of clover roots in improving the soil. But I will forbear, after stating that comparatively very few farmers seem to be aware of the value of the roots of clover to the soil. They don't seem to be aware of the fact that after taking two or three good crops from one sowing of seed a valuable crop of clover roots is still left, which, according to an experiment given in Johnston's Agricultural Chemistry, page 423, "in a clover field at the end of the second year the fresh roots were equal to one-third of the whole weight of green clover obtained at three cuttings—one the first, and two the second year—while in the dry state there were fifty-six pounds of dry roots to every hundred pounds of clover hay which had been carried off." Consequently if the three cuttings gave four tons of hay, there would be about two and a quarter tons of dry clover roots. While in a table given by the same author, page 451, two hundred and fifty pounds of clover roots are said to be equal to one thousand pounds of farmyard manure, which would make two and a quarter tons of clover roots equal to nine tons of barnyard manure. And this is, at least in a considerable measure, corroborated by other experiments I have met with, as well as my own experience.

But I am making this talk too long. Will H. give his views in regard to these matters? F. *Orleans Co., N. Y.*

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[For the Country Gentleman and Cultivator.]

To what Crop to Apply Manure.

Eds. Co. Gent.—In the Co. Gent. of April 18, the question "What crop shall we manure?" is asked. Experience is said to be a *dear* school, but after all that is or may be said, it gives us facts, and facts no class or profession need more than the farmer. To him experience may not be dear, for he can try his experiments on a small or a large scale. He *should* be an experimentalist. No man, however small or few his acres may be, should let twelve months pass over his head without trying one or more experiments, and noting down carefully when he sowed or planted, how he did it, what the soil, seed and season were, and what the result was. It takes but little time, and in the end it makes a pile of notes worth reading.

I have done so for the past fifteen years; but on looking over my notes, I find they do not in some respects agree with those of my brother farmers. My experience is that manures cannot be used to better advantage, and with more profit in the end, than on clover and timothy, or whatever you seed down your land with. My experience teaches me not to run my land, i. e., taking off say ten or a dozen crops of grain in succession. I turn over the sod and plant either corn or potatoes, or sow with peas—sometimes with oats. I take off usually two or more grain or root crops, and seed down with clover and timothy, or either. I apply the manure, as fast as made or rotted sufficiently, to all the meadows or pastures, or as far as possible—a light coat is better than none. Experience says sow a half bushel of clover and timothy seed to the acre, on land not underdrained, drag it in or not, but be sure to roll afterwards. Keep putting on your manure every year until you wish to plow. Turn over your sod and proceed as before. Experience teaches me that my land is growing more productive every year.

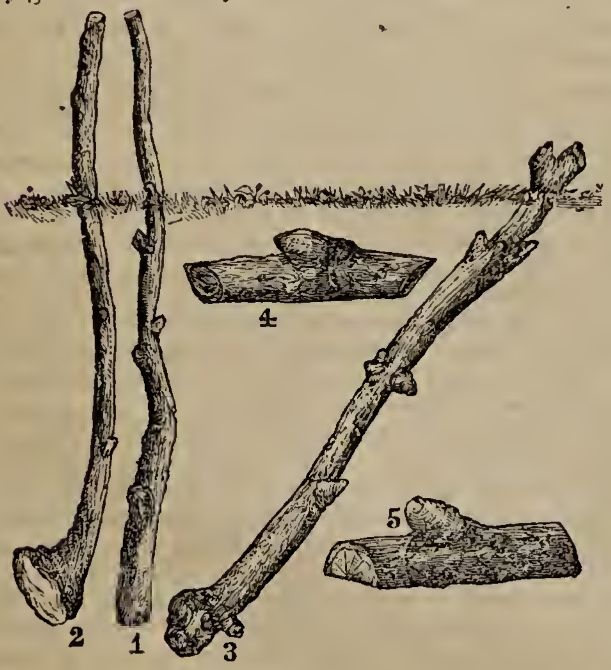
Springwater, N. Y. BYRON.

Growing Grapevines, &c., from Cuttings.

In the Co. Gent. of May 16, p. 318, we published a communication from Mr. Miner, controverting a statement of the *Rural New Yorker*, that the Delaware Grape could be grown from cuttings, to which that paper replies as follows:—

We repeat, what we before said, that the Delaware will grow from cuttings. This we know, as we had a good many grown in that manner, and out of doors, last spring. We readily admit that the Delaware will not root as freely as the Isabella and many other varieties, but we do say that the short cuttings of the Isabella, planted as described above, would fail in nine cases out of ten. Under the most favorable circumstances of soil and climate, a short cutting will root, but then it should never be planted two inches below the soil. The proper cutting for out-doors is a long one, with about four buds, set sloping, with one eye just above the surface. The following is what Mr. Barry says on this subject in his Fruit Book: "As a general thing, cuttings should be inserted so deep that only two buds will be above the surface of the ground, and in the vine only *one*. If cuttings are long, they need not be set perpendicular, but sloping, so as to be within reach of heat and air. A cutting of a single eye of the vine with a piece of wood attached, must be entirely covered, say half an inch deep. But such cuttings are seldom planted, except in pots, in houses, or in hot-beds."

Since there has been a good deal of excitement on the grape question, and vines of some new varieties have been scarce and dear, our nurserymen have propagated grapes in houses very rapidly. This process we will not at present describe. The soil for all cuttings should be well prepared, mellow, finely pulverized and moderately rich. Propagation by cuttings consists in causing a shoot to grow by detaching it from the parent tree and planting it in the ground, at the proper season and under favorable circumstances for the development of roots. All fruit trees may be grown from the cuttings, but only a very few grow with sufficient ease to make it desirable or profitable to propagate them in this way. The gooseberry, currant, vine and quince, of our common fruits, are generally grown in this way.



Grape Cuttings.

A *cutting* is a shoot or a part of a shoot, and generally of one season's growth. A foot is the proper length for cuttings, for ordinary out-door culture, though under some circumstances a single eye or joint is used. We give an engraving, showing the different forms of cuttings as well as the manner of planting. The wood should be as stout and mature as possible, and should be cut close and smooth to a bud at both ends, as seen in figure 1. Cuttings, taken off closely to the old wood, with the base attached, as in figure 2, are more certain to grow than when cut at any point above, and in the quince an inch or two of the old wood left attached renders success more certain. The philosophy of the matter is, that the descending wood-forming sap forces out roots at the lower end of the shoot, and thus the cutting becomes a new plant. The more buds that can be got around the base of a cutting, the better, for these buds, as soon as they become active, send down new matter for the formation of roots.

Scarce varieties of grapes are propagated by eyes having about two inches of wood attached, as seen in figure 4, and success is supposed by many to be more certain where the joint is halved before planting, as shown in figure 5. When this mode is adopted, it is usual to plant the eyes about half an inch deep in light soil in a hot bed, or in pots in a propagating house. Figure 5 should not be planted deep as shown in the engraving, being placed there to economise space in our columns.

Cuttings should be inserted so deep that only two buds will be above the surface of the soil, and in the vine only one. Vine cuttings it is well to make long, but they need not be set upright so as to be out of the reach of heat and air, but sloping, as we have endeavored to show in figure 3. They may be set much more sloping than we have been able to exhibit in the engraving, from lack of room.

Cuttings may be made any time during the fall or early winter. It should always be done before the buds begin to swell. A soil for cuttings should be mellow and warm, yet sufficiently compact to retain moisture. Those who try to grow them in a hard, baking, compact soil, or one low and wet, or dry and sandy, will assuredly fail.

Very early in the spring is the best time, all things considered, to plant cuttings. If it is delayed until late, the warm weather starts the leaves before sufficient roots are formed to supply the demand they make for sustenance, and the cutting dries and perishes. Those who grow only a few cuttings could shade them, or spread sawdust about them, to preserve an even temperature.

Cuttings made in the fall may be buried out of doors in a pit where the water will not stand. A mound of earth should be made over the pit to throw off the water. Particular attention should be given to cuttings after planting, to keep the weeds destroyed and the ground in a mellow condition.

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BALLOON FRAMES---14th Article.

[Written exclusively for the Country Gentleman by Geo. E. Woodward, Architect and Civil Engineer, No. 29 Broadway, N. Y.]

It sometimes happens, in the construction of large buildings, that both strength and economy are better consulted by having the floor joists run parallel with the front, or at right angles to the direction of the rafters. The roofs of such buildings should be supported by a gallows frame, or in some manner so that the thrust of the rafters may not come on to the studding of the outside walls. In small-buildings, the arrangement is such, that the thrust of the rafters is in the direction of the fibre of the floor joists, and the gable end studs are secured at each floor by nailing them to the side of the floor joist. But in larger buildings, it is necessary to run the floor planks in along side the studding, and nail them, in the manner shown in fig. 23, so as to make the tie in that direction perfectly secure. If the building be of that size and arrangement that the thrust of the rafters come in the direction of the floor plank, and it is not deemed necessary to introduce any interior support to the roof, an iron anchor, or better still, an iron bolt, as shown, may be used to secure every 3rd or 4th stud, and this, together with the nailing, as described, will make all abundantly safe and secure.

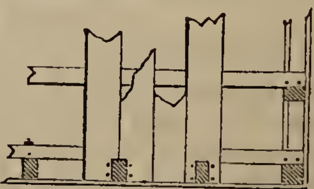

Fig 23. Flooring—showing lengthwise and crosswise manner of tying frame.

The size of building and span of roof, the degree of pitch, and the manner of supporting the roof, will sometimes make it necessary to use a little deeper studding. This applies more particularly to barns, and those houses whose upper stories are less than whole ones. The steeper the roof, the less the thrust; the flat Italian roofs have the strongest thrust. It is not possible to give such instructions, or even such sizes of timber as will suit all cases. We give the general principles, and one must use his own judgment as to what will best meet his particular wants.

It is altogether probable your mechanic, if you employ one, will use all his eloquence to dissuade you from adopting this frame, he thinking, by its use, that "Othello's occupation will be gone." If you still decide to try it, then he will insist on heavier timbers; the prejudice in favor of heavy clumsy timber is hard to eradicate. The great point of weakness urged in the Balloon frame, is in the side-girt 1 by 4 inches, which is thought better 2 by 4 in., if it did not weaken the studding too much when gained in. The fact is, the floor joists, which are of the same strength as in the old fashioned frame, will break before a 1 by 4 in. side-girt will give way. The force applied here is a crushing, instead of a breaking force, and requires six tons weight on every surface inch of the bearing to do that. If it were to sustain a breaking force only, a girt 1 by 6 in. is *one-eighth stronger* than one 2 by 4 in., and 25 per cent. less material in it. A floor joist, 2 by 9 8-10 inches, is of the same strength as one of 3 by 8 inches, and less material by above twenty per cent. A knowledge of the strength of materials and their application, has a money value when one contemplates building.

A peculiarity of the Balloon frame, as we have before stated, is that each floor beam and rafter is supported by a stud running from foundation; the same strength is thus had with lighter materials, on the same principle that a bridge with ten piers may be lighter than one of equal length that has not any. Where wide openings, like bays, are indispensable, it becomes necessary to increase the sizes of the timber, and to adopt the mortice, tenon, and brace.

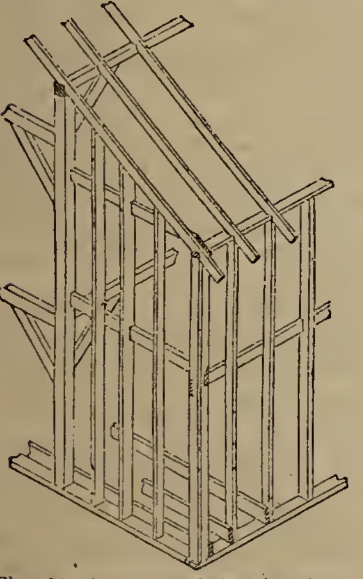
Fig. 24.—Manner of framing large Barns, Balloon style.

In fig. 24, is illustrated the manner of framing the largest class of Barns, having large bays and a threshing floor, and being 20 feet from sill to rafter plate. A gallows frame is constructed in the usual way, of heavy timber, and around this is erected the Balloon frame; the studs used are 2 by 6 inches, every 3rd one being 2 by 8 inches, and into which, the side girt is gained, being nailed to others; this supports one end of the temporary floor. The studs are from 2 to 2½ feet apart, and the whole side is precisely like a floor turned up on its edge; it is held securely by the floor joists at the bottom, and the rafters and ties at the top. The gallows frame is built of 6 by 8 inch timber, and the rafters are to be so secured to it, that they become ties to the side studding. There is no saving of timber in a barn frame like this; the total quantity being about the same, but the sizes far less. The great saving, and it is an important one, is in the labor; as there is no work outside the gallows frame, but what an ordinary hand can do, as well as a finished mechanic. We believe that this makes a far stronger frame than that made with heavy timbers, and is as fully adapted to its purpose. Of the lateral thrust of hay to any extent, we have our doubts, and should not deem it necessary to make any very great calculation to counteract it; those who consider it of much importance may make the studding little deeper.

[For the Country Gentleman and Cultivator.]

No. 28---APPLE TREE BORER.

A subscriber in Doniphan Co., Kansas, writes under date of May 10th:

> I find on my pear and apple trees the enclosed bug—said bug enters either at the topmost fork or forks of the tree, or at the intersection of the young limbs with the trees, or at the top of the young buds—he seems to seek the heart of the bud, or the pith or marrow of the young limbs. Its ravages injure the tree exceedingly, generally destroying the limbs, and always the buds, attacked. Queries—1. What is it?—2. Is there any preventive, except watchfulness and the darning needle?—3. Should the parts damaged be cut off or out, or the holes stopped with something? Is the rascal a native here and elsewhere in the United States? I can't find him on my neighbors' apple trees.

The insect enclosed in the above communication is the the apple twig borer—the *Bostrichus bicaudatus* of Say. It is a hard shelled beetle, varying in size from a quarter to nearly three-eighths of an inch in length, and four times as long as thick. It appears of an exactly cylindrical form when viewed on the back, but it is slightly flattened on its under side. Its color is very dark chestnut brown above, and black beneath. Its thorax or fore body is almost globular, and conspicuously separated from the hind body. Its forward end is very rough from projecting points, like a rasp or grater, and in the males here are two longer processes, like little horns, whilst at the hind end, above the tips of the wing covers, are two small, prickle-like points, which are curved inwards, and which do not occur in the females. These marks will sufficiently distinguish this from all the other insects found on our fruit trees.

This apple twig borer has of late years been common in the orchards of Michigan and Illinois, and occurs from Pennsylvania to Mississippi; but I do not know that it has ever been met with in New-York or New-England. Where it is present among apple trees, particular twigs will be observed withering and dying in the middle of the summer, and on examining these twigs at one of the buds from six to twelve inches from the tip end, a hole the size of a knitting needle is found running into the pith or heart of the twig, which pith is consumed some inches in length, one of these beetles being found in the cavity. My information hitherto has been that it only attacked the soft young twigs in which is a large pith—boring downwards from the point where it enters. If the observations in this letter are exact, it also sometimes perforates at the fork where a young shoot comes out from an old limb. Does it in such instances bore upward in the base of the young shoot, or downward in the hard wood of the limb?

I know of no remedy for these insects better than to cut off and burn every twig whose withered appearance betrays one of these culprits nestling therein. If it bores into the larger limbs, a darning needle or small wire thrust into the hole so far as to reach and kill the insect may be better than severing the limb. Plugging the hole, even with hard soap, pitch or any other offensive substance, I think would avail nothing; but this can only be conclusively determined by a trial and carefully noticing the results.

Salem, N. Y., May 26, 1861. ASA FITCH.

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☞ "Horses sometimes gnaw their bridles." The editor of the Homestead has had experience in such a case, and devised an excellent remedy:—"One of our horses was in the habit of chewing the rein of his mate, or some other part of the harness within his reach. We dissolved aloes and assafœtida in dilute alcohol, and washed the reins with the tincture. One trial was enough for the beast, as he did not like the medicine."

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☞ THE KENTUCKY AG'L. AND MECHANICAL ASSOCIATION at their annual meeting in Lexington on the 11th inst., elected the following board for the ensuing year:

President—BENJ. GRATZ.
Vice President—R. A. Alexander.
Secretary and Treasurer—P. Burgess Hunt.
Directors—Wm. Warfield, Abraham Vanmeter, James G. Kinnaird, Jacob Hughes, James Foley, and Edward Oldham of Fayette; A. D Offutt of Scott; R. S. Taylor of Clarke; S. P. Kenney of Jessamine; and A. Buford of Woodford.

[For the Country Gentleman and Cultivator.)

MISCELLANEOUS NOTES.

Soaking Grain.

Somewhat has been said, *pro* and *con*, at one time and another, concerning the policy of soaking grain before feeding. For sheep, at all events, we are satisfied the practice is inexpedient. Having fed lambs, (yearlings,) with peas a portion of the past winter, and the grain becoming so hard that it was with difficulty broken, and the teeth of the lambs in consequence getting sore, we soaked a few peas until comparatively soft; yet, although the water was well drained off, the lambs could hardly be induced to eat them, appearing to decidedly prefer the dry, flinty grain, over which they made wry faces as they cracked it. For hogs, on the contrary, we find soaked peas excellent. But sheep dislike anything "mussy."

Parsnips.

There appears to be a discrepancy between Mr. Bartlett, (p. 234,) and George, (p. 282.) Dr. Lankester, as cited by the former, gives the parsnip more than twice as much *starch* and fiber as the potato. George's authority (not named,) gives the potato three times as much as the parsnip. Here we should suppose the latter the more correct. Again, while the former only allows the parsnip to possess about twice as much *gum* as the potato, the latter states it as containing full seven times as much. Again, while Mr. B.'s authority gives the parsnip *less sugar* than the potato, George gives it nearly twice as much. Here, too, is not the latter correct? Again, though neither is very clear, the former gives the parsnip less flesh-producing constituents, while the latter allows the parsnip twice as much of this quality as the potato. Here, we should say, the error is on the other side. Had the tables said fat-producing, the ratio of two to one might seem reasonable. Attention is directed to these discrepancies not for the sake of criticism, but to induce investigation. The parsnip deserves a trial.

Hungarian Grass.

The response of W. R., (p. 283,) which had not appeared when our second inquiry, (p. 304,) was written, is satisfactory, except that his meridian, (Nebraska,) is so distant from ours, (western N. Y.,) that some of his remarks may not apply here. May we not hear from some one nearer home? N. N. N., (p. 125,) regarded the hay injurious to horses. If all that is said in its favor from Iowa, in U. S. Patent Office Ag. Report, 1856, p. 306, is applicable here, the crop deserves *immediate* and *general attention.*

The Best Time to Fell Timber,

(Page 305, &c.,) is undoubtedly summer. But the theory and practice of the past are against us. A statute of James I. recognizes the superior quality of timber winter-felled. In France, as long ago as 1669, a royal ordinance limited the felling to the period from Oct. 1 to April 15. The first Napoleon issued a decree, setting forth that ships built of timber felled at the moment of vegetation, were liable to rapid decay, and required immediate repairs from the effect of "*fermentation of the sap*" in the wood, and abridging the time of felling timber for naval purposes, directing that it take place only in *the wane of the moon*, from November 1 to March 15. From the foregoing it will be seen that the doctrine of winter-felling, though now proved by experience to be erroneous, has high authority, and that even Napoleon the Great put faith in "lunar influence."

Covering Land with Straw.

For grass this may answer, (p. 304.) Undoubtedly grass will grow better where even a blanket has lain. But upon wheat, the writer very well recollects his father tried the experiment many years ago, and obtained a fair crop of chess, with a few heads of wheat which never ripened. We are all apt to generalize hastily upon too small a basis of induction; but a farmer who cannot afford to experiment frequently, may be excused from a second trial after so disastrous a result from the first, even granting it to be possible that the failure was owing to other causes.

HAMPDEN.

[For the Country Gentleman and Cultivator.]

CULTURE OF RAPE.

In reply to an inquiry from H. V. S., in Co. Gent. of May 9, respecting the cultivation of rape, and the kind of land most suitable for its growth, I wish to say: The land best adapted for growing rape is a deep black loam, laying low, or of a moist nature. Such a soil, with a good cultivation, will produce good rape without manure. But if H. V. S. has no such piece of ground, and is compelled to use old ground, it should have a good dressing of dung, or hand manure, such as guano or ground bones. I got good rape last year with seven hundred pounds of ground bones to the acre, sown broadcast on the surface before ridging up. The ridges 24 inches apart, made with a common plow. The seed drilled in on the 7th of June, one pound to the acre. The plants grew 2½ feet high, and I commenced eating off with sheep in the middle of August. Spring wheat is growing on the same ground at the present time, and looks well.

As regards the preparation of the soil, if the dung could be put on in the fall of the year, I should prefer it to spring manuring, for two reasons. First, the flies are worse on the young plants if the dung is put on in spring; and second, it crowds the spring work very much, having the dung to haul, especially in a late and wet spring like the present. But if the ground is dunged in the fall, and plowed to a good depth, it gives the frost a chance to pulverize, and makes it work more easily. As soon as the ground will admit in the spring, cross plow and work down with the harrow and cultivator to a fine, smooth surface, and draw the ridges from 24 to 26 inches apart. Roll with a light roller, to keep in the moisture, and then put in the seed with a little seed drill or barrow, such as is used for drilling the ruta bagas, which can be wheeled by a man, in the center of each ridge. As soon as the plants are up about two inches, or well broke out into rough leaf, start the horse hoe between the rows. Do not suffer weeds of any kind to grow. Rape will grow along with weeds, but grows far better without them.

If wanted for early feeding, do not thin out the plants, as they grow much quicker when left thick; and when it has got about the height of 12 or 14 inches it is ready to commence cutting a little for young calves. After cutting, it will make a second growth, and throw up considerable food for fall feeding. But if wanted to grow until late in fall, thin out the plants to a distance of from 6 to 8 inches. It will then stool out, and produce more to the acre than a thick crop, unless the ground is very rich.

The amount of seed per acre will vary a little; for early sowing, put on plenty of seed, say 2 pounds per acre; and if the flies are troublesome, there will be some extra plants for them to work at; but any time after the 15th of June 1 pound per acre is quite sufficient. To have it come in all through the summer, sow at three different times, say last week in May, and 15th and 30th of June. The price of seed is 25 cents per pound, retail, and sold by most of the seed stores in Canada, and I think very likely can be obtained in Albany and New-York, which H. V. S. can very soon ascertain. J. K. *Guelph, Canada West.*

[For the Country Gentleman and Cultivator.]

COST OF FENCING.

Messrs. Editors—My respect for your Warner correspondent is such, that whenever I see his name on your title page, I turn *first* to the article connected therewith. So did I to-day, on receiving your paper of this date, (May 9th,) and have read his remarks *on fence-making*. It is perfectly astounding to estimate the amount expended for this purpose, especially when stone walls are erected at an expense of one or more dollars per rod. I know of many farms, where the walls upon them have cost as much or more than the farms would command in the market. This is anything but good economy.

I like you correspondent's idea of saving land in the construction of fences, and building them so that they will not need to be rebuilt once in a dozen years—as is the case with most wooden fences that have come within my observation. Where is the necessity of so much fencing? If cattle are not suffered to run at large, most crops will grow just as well when the land is not subdivided by fences in lots, as when it is so divided. Is not this one of the absurdities in management that has been generally practiced without considering the necessity thereof? I presume this superabundance of fencing is much more common in New-England than in New-York, or on the prairies of the West, though I have never seen much of those lands, and now never expect to see them.

May, 1861. ESSEX.

"TRY FOR BETTER CROPS."

We frequently observe the reminder that the demand for farm products is to be largely increased by the war; hence farmers should sow and plant more largely than usual. This may be good advice, rightly taken; but the better admonition in our view is, to "try to grow larger crops," by preparing the ground more thoroughly, cultivating better, and giving attention to every means to increase the product.

As much corn can be grown on five acres, well manured and carefully planted, with some hill-fertilizer to give it an early start, and then given clean and mellow culture, so as to enjoy the full strength of the soil, as upon ten acres imperfectly prepared, carelessly planted, and half smothered with weeds through the season. The same is true of beans and potatoes, as well as root crops. The spring grains are much better for a thorough preparation of the soil, and careful attention to harvesting will farther enhance their value. It is of little use to sow largely and then waste for want of attention, as was largely the case the past season in some localities for want of help and pleasant weather—much corn remaining unhusked through the winter, and large losses falling on other crops.

Every farmer may perhaps be able to recall some instance where he has suffered loss by sowing or planting too largely, but few we opine can say they have given too good care to their crops—have farmed too high—or cultivated too thoroughly or cleanly. Let us grow all we can, in view of the home and foreign demand, but remember that good crops are more important in forwarding the desired result, than largely increased seeding without careful preparation and cultivation of the soil.

Why do Hens Eat their Eggs?

It has already been stated that eggs are composed chiefly of *albumen*. Now, when fowls are compelled to eat, grind, and digest a large quantity of coarse food, which contains but little albumen, there is a longing and hankering after more nourishment, or something that will supply the waste of their systems, which is daily passing off in the form of eggs. I suppose that this hankering is not unlike the sensation which a man feels who is making an effort to abandon the use of tobacco, although I am not able to speak from *personal experience* in such a matter, having never tasted nor smoked the "devil's weed." Consequently, they are ready to devour anything that is eatable, and as soon as they get a *taste* of eggs, they find that they obtain a large quantity of just the nourishment which is demanded by their systems, and but little time and muscular energy is required to transform it into eggs again.

Another thing, also, which induces hens to eat their eggs, is, they have a hankering for something that will form *a good shell;* and nothing is better for that purpose than the very shells. Consequently, when the shells of eggs are thrown to hens, when only broken in two, it will often learn them to try a whole shell when the egg is in it.

Fowls, when laying, must have *lime.* I keep a dish of clear lime always within their reach. This is far better than to compel them to pick and work over a lot of mortar, for the sake of obtaining only a small quantity of lime. Every egg shell should be broken into small fragments, and mingled with fresh meat chopped fine, or with scalded meal thickened with milk, or even made thick like mush. By allowing hens to have all the lime they need, the egg shells will be much thicker and more firm, than they will when hens are compelled to find materials for the egg shells only in their food, or in bits of old mortar, or by eating lumps of earth.

Lake Ridge, Tompkins Co., N. Y, S. Edwards Todd.

Hen's Nests---Sure Remedy for Eating Eggs.

Fowls of all kinds when laying, like a secret place, where their fellows cannot see them. Therefore, they do not like to squat down in the hennery, surrounded by a greedy flock, that are ready to pounce into the nest, as soon as an egg is layed, and devour it. Therefore, to gratify the hen's secretiveness, and at the same time save the eggs from being devoured by any one of the flock, my practice has been, for a number of years, to make their nests of *nail kegs*—not those that are very small, nor the largest ones, but of those that will hold about one hundred lbs. of nails. In years past, I have been accustomed to fill a keg about half full of straw for a nest; but, the past winter, I have sawed all the kegs in two equal parts; knocking out the heads, and then nail a piece of cloth over the large end of each half-keg, for a bottom. Any kind of old or new cloth may be tacked on with small trimming tacks. During the winter, these half-kegs are nailed up against the side of the hennery, about four feet from the floor. Hens that lay will soon learn that when they get into these nests, their fellows cannot see them, as they are completely secluded in their cosy little nests; and if they themselves, are disposed to eat eggs, they find, that if they attempt it, while standing on the edge of the keg, they cannot reach them conveniently; and if they hop down into the nest, and attempt to pick the eggs, they will roll down against their feet, and they soon learn, that they are not able to pick hard enough in such a position, to break the shell. I find that a *cloth* bottom is superior to a wooden bottom, covered with a nest of straw.

As the weather becomes warmer, so that the hens seek nests in the yard, we make nests in secluded nooks, or the kegs might be removed from the hennery, and nailed against the side of the fence, and a little roof made over them.

Confining Poultry in their Yard.

Hens like a great range, and they always do infinitely better to run at large, most of the time, at least, than they will when confined even in a spacious poultry yard. I allow my poultry-yard gates to be open as much as possible; and when it is desirable to keep the poultry in their yard, we are sure to let them out for two or more hours before night. This enables them to obtain food that they cannot find in their enclosure, such as bugs, worms, fresh grass and such like; and by keeping them in their yard during most of the day, all their eggs are layed in their nests in the yard or in the hennery; and as their time is limited for ranging about, they seldom stop to scratch much, even in the garden or other places. If they are let out of their yard in the former part of the day, they will soon be making nests, when the eggs will be lost, or will be into some mischief, when it will be difficult to get them back again; whereas, at evening they will return themselves, when the gates can be closed.

Lake Ridge, Tompkins Co., N. Y. S. Edwards Todd.

Keeping Hams.

We have found it a good method in keeping hams and shoulders, to let them hang in the smoke-house, or a tight, dark room, and give a few hours smoking every week or ten days. This will keep out flies and bugs, and keep the meat free from damp and mould. B.

Spiced Hash.—Take the remnants of a cold steak, or any other kind of roast or boiled meats; hash them fine, and mix with potatoes well mashed, and add one or two beaten eggs; season to your liking, with salt, pepper, nutmeg or mace, and cloves; make it into a loaf and bake brown; it is good eaten hot or cold.

[For the Country Gentleman and Cultivator.]

"OLD HURRICANE" ON ROOTS.

Messrs. L. Tucker & Son—Having been more than usually successful this last season in the culture of roots—mangel wurtzel, sugar, long blood, red and turnip beets, ruta baga, cowhorn, flat purple-top, and white French turnips, (these last, by-the-by, excel all others greatly as a table root, lasting well into June, and good also in the autumn and at all times,)—my practice may be of interest to some of your many readers.

The beet seed I plant as early as possible in highly enriched beds—the earlier the better—and transplant the last of May or early June, to the land intended for beets, that has been highly manured, and thoroughly and deeply plowed, and pulverized by frequent harrowing. Then select a cloudy day for transplanting. Have the plants carefully raised with a spade from the seed-bed, earth and all, and afterwards carefully separated. Let one with an iron-pointed stick make the holes, another place the plants in the holes, and the third one follow with a sharpened stick, earthing the plants well in, and few, if any, of the plants will perish, as the beet bears transplanting remarkably well, and these two past seasons I have noticed little, if any, difference in the size of those transplanted and those left in the seed-bed. By transplanting, you get older, consequently larger roots than by field culture. You also plant the rows nearer together, and have more plants to the acre; also save two hoeings and thinnings—the most tedious and expensive work about root culture; also, by later working, your land is in finer and better condition, every way more satisfactory. The greatest and only drawback I have found, has been the weather, about the time the roots should be transplanted; as cloudy weather is desirable—almost necessary.

Parsnips and carrots I have sown in drills, on clean good land, and cultivated in the usual manner; but this year I have departed from my usual practice, and sowed in *raised drills*—height of drill four to five inches above valley—on highly manured land, and have never seen my roots look so well at this early season.

Soaking the seeds in warm water thirty-six to forty-eight hours, will make several days difference with their germinating; consequently they are not smothered with weeds before appearing above ground. In sowing the soaked seed, drain them well, and mix in corn-meal until they will easily sow and separate.

I have also planted my beet seed in raised drills, but shall transplant as heretofore.

And now for the turnip crop. It is customary for my neighbors—at least all of those who are feeding a large number of milch cows—to raise one or more acres, either flat or cowhorn, as these can be sowed late, and are of large *bulk*. Their practice is to sow broadcast, and frequently when seeding down fields to timothy and clover, to manure highly and mix the turnip and timothy seed together, sowing the clover in the spring, and in such fields there is usually a splendid crop of weeds.

Very few or no ruta bagas are cultivated—they say it is too much labor and expense—and none of the beet family. This broadcast manner of raising a root crop seems to me a lazy, dirty, slipshod manner of farming.

Is not the excuse, viz: too much labor, the root of bad agriculture?

The writer, so long as he raises roots, will give them clean culture, and for sound business reasons. It will not pay him to half cultivate; he must tax his soil to its utmost capacity by the highest manuring and cleanest culture, *leaving his land at the close of each season in better condition than at the beginning.* Again, I am satisfied, from an examination of my own crops, and those of others, *that it pays.*

Last season was my maiden effort at turnip culture. I planted and cultivated in drills, giving good clean culture, but had little or no manure, and yet of some three or four acres, all that had any manure, are very superior to those of my neighbors, both in size, quantity and quality, who *manured without stint*, and sowed broadcast.

In the early part of July I prepared a half acre for ruta bagas; *gave the land no manure*, sowed the seed in raised drills, four to five inches above the valleys, and such a crop as I had, so large and weighty, uniformly so, many weighing 12 to 14 pounds, the admiration of every one who saw them, and yet at this date, 26th of May, are as cookable, eatable and palatable as last autumn. My design is to put in several acres this season, and to manure highly and sow in raised drills. My land is prepared in the following manner:

1st. Well and deeply plowed.

2d. Well harrowed.

3d. Open drills for manure by going with small plow twice in the same furrow.

4th. With wagon or cart draw the manure, and afterwards fill in the furrows.

5th. Covering manure by going twice on each side, this leaves a ridge.

6th. With hoes, or roller, clear and even the tops of the ridges.

7th. The ground being now ready, sow your seed, either by hand or with a machine.

Jersey Farms. "OLD HURRICANE."

P. S.—The writer sends greetings to his relative at Claverack, N. Y., "Ballarach," and thanks him for his considerate invitation to visit the Dutch region, known, wherever it be, for its hearty hospitality; and furthermore, the writer will, during the present season, Providence permitting, avail himself of this kind and generous invite.

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[For the Country Gentleman and Cultivator.]

How to Enlarge the Manure Heap.

Messrs. Editors—There are several ways for increasing the quantity of manure made upon the farm; some modes are better than others, but all are *good*—the *poorest* better than none. Those who have access to muck, undoubtedly have the best material for this purpose, for in addition to its intrinsic value as a fertilizer, when properly composted, it is a good absorbent, and if used when dry, it will take up and hold the liquid portions of the manure, and thereby save what would otherwise be lost. Many, however, cannot resort to this material, if so disposed—myself being of this number. I should consider it a windfall, if on awaking some morning I should find an acre or so of my farm converted into a muck swamp of the right kind. But as this transmutation has not yet, and is not likely to take place, I have for some years practiced the following method for enlarging the "pile," and find I can about double the quantity made, while the quality is equally as good, for all the liquid is saved.

I usually plow up from five to ten acres of green sward in the fall, and before I commence plowing I stake out the ground, and with the team and plow go round the piece and turn up a furrow. This furrow I draw to the barn-yard, and a portion of it is spread over the bottom of the yard; a pile is then made conveniently near, to be mixed with the manure as it is taken from the stable. This can be done until freezing weather. The manure thus made in the early part of the fall, is drawn out in March, or before the frost is out of the ground, and dropped in small piles, to be spread just before working the ground for spring crops. The turf by this time has become pretty thoroughly rotted, and well saturated with the liquid manure, and the handling in loading and unloading mixes the whole together. That made later—during the winter and spring—is moved a short distance as soon as the remainder of the turf is thawed sufficiently to be handled, and all is mixed together. This is forked over once during the summer, and is put upon the land in the fall and plowed in. I use a good deal of straw for bedding, and this, with the turf, absorbs all the liquid. At the lower side of the yard there is a sink or basin, which is filled with turf to take up the washings of the yard. In the spring the yard is thoroughly cleared up, and all thrown into a pile together for fall use, and the ground is covered about a foot thick with the sod, where the manure is to be deposited when taken from the stable during the summer. I find it very important to have a good supply of absorbents for summer use, for when stock are kept upon green food the quantity of urine is greatly increased; and when soiled, if enough absorbents are used, a much larger quantity of manure can be made in the same length of time, than can be made when cattle are kept upon dry food. The hog-pen is not neglected in this matter; but a plenty of litter is used here, and all goes into the common stock. After potatoes are dug, the tops are drawn to the barn-yard to be manufactured into better manure than they would make if left upon the ground. I have another mint for coining some 25 or 30 loads a year, of the very best of manure for top-dressing meadows. A quantity of this turf is drawn a little back from the house, and the top of the pile is left flat or a little dishing, and all the slops, wash-water, soap-suds, and every conceivable thing that is to be thrown out of doors is put upon it; and after it has become well saturated, it is shovelled over and leached ashes mixed with it, and then another pile takes its place. I also have about two hundred rods of open drains upon my farm, and when these are cleaned out, as it becomes necessary to do once in two years, the scrapings are either spread upon grass land or drawn to the barn to be worked into the manure heap.

But Mr. Shiftless thinks this is too much labor; says he raises pretty fair crops—20 or 25 bushels of corn, and from three-fourths to one ton of hay to the acre—without all this ado about manure; and Mr. Lazyman is of the same opinion. These gentleman take little or no care of the manure ordinarily made by their stock—in fact their cattle are generally so poor they cannot make much manure—but it is left to leach and wash away, and the little they put upon their land is not much better than turf rotted and applied without further preparation. And furthermore, they are not to be benefitted by the experience of others, for they take no agricultural paper. They read but little, and think less.

Another gentleman, Mr. Noddlefull, *knows* it won't pay, although he has never tried it. But he *knows* the sod is not worth for manure the labor of drawing to the barn and back again to the field. When he uses manure, he wants something that is manure—don't believe in adulterating his manure with *dirt.* But he occasionally sends to the city and gets a few hundred pounds of something that is probably *three-fourths* dirt, scented with night-soil, guano, or some other article to give it a *fertilizing smell*, for which he pays from two to three dollars a hundred; but he knows too much to adulterate his manure heap. Now this man is a hopeless case, for he does not believe in book-farming—although he does believe in patent manures—therefore he does not take a paper that treats upon farming, and it would be useless for him to do so, for, as his name indicates, his head is incapacitated for holding more. To these individuals, and others of like calibre, I have nothing to say—one knows too much, and the other not enough to comprehend the thing—but to those who have nothing better, and who really wish to improve the fertility of their land, or at least to have it remain *in statu quo*, I would say, just try this mode of increasing the manure heap—on a small scale, as an experiment—and if it proves as satisfactory to you as it has to me, you will be likely to follow it; and do not forget the pile for the slops.

The best way to handle the sod is with a dung-fork; it is easily loaded with this implement. When it is to be drawn a great distance, the better way perhaps would be to pile it near where it is taken out, and draw the manure to it, if it is to be used afterwards upon the same field, though I prefer taking it to the yard, as more of the liquid can be saved by using it there. Last fall I drew in one hundred two-horse wagon loads—twenty loads a day—and should have drawn more had the ground not been so wet.

Jefferson Co., N. Y. J. L. R.

[For the Country Gentleman and Cultivator.]

Letter from John Johnston on Feeding Cattle and Sheep.

G. W. H. asks my opinion on the comparative value of the following kinds of feed, at prices he names, for fattening cattle and making manure—say oil cake meal at $2.10, corn meal at $1.50, and wheat middlings $1.30 per 100 lbs. I am afraid I cannot answer these questions satisfactorily, but one thing I am sure of, the prices he names are far too high to make feeding pay at the price of beef, unless where farmers *must have manure*; and the time is fast approaching when every farmer must have manure, and good manure, or else an immense deal less grain must be sown, and the land rested; but then it must have a covering of grass or clover while resting, and how exhausted land is to be covered with either, without manure, I cannot tell.

I have no doubt that feeding cattle and sheep with oil-cake, corn, peas, beans, barley or buckwheat, and plentifully, although it may as often be at an apparent loss as profit, yet in the course of years may be profitable; and even if there was no profit on the stock highly fed, the increase of grain and grass will, *I am sure*, pay abundantly, and grass on highly manured land pays as well, or, I think, better than grain, unless it is corn. The high feeder of both *stock and land* is liable to serious losses in growing seasons by his wheat, and other small grains, lodging; but corn and grass have always been best when I manured highest, and I have, I think, had always the best crops when I fed most oil-cake. There is no doubt but it is by far the best feed for cattle and sheep for making manure, and at least part oil-cake, even at a much higher price than corn, may be profitable when fed with corn, and then it improves the manure, and I know it improves the sheep and cattle greatly.

Buckwheat, I think, is excellent to fat either sheep or cattle. When I buy feed from flouring mills I always buy bran; I am confident I get more value for my money in that than in any other feed they make. I have fed middlings, long ago, but I feel confident that bran is cheaper. It is, however, seldom that I do not find oil-cake and grain cheapest; but bran will start young lean cattle to grow, sooner than corn. Any kind of grain fed to stock will make manure at a cheaper rate than purchasing the manures of commerce, at least on our clay soils of Seneca Co.

But the great mistake with farmers generally, is, when they manure a field thoroughly, they keep tilling it as long as it will produce crops, and then they seed with clover and grass when, at last, it is apt to be so poor that it gives light crops, or no crops at all. It is only on land that is exhausted by raising grain that clover or grass seed don't vegetate; they scarcely ever fail on rich land.

Sheep and cattle fattening has not paid this winter hereabouts; I made the best sheep I ever owned, but they did not pay—reason, the sheep were bought at too high a price last autumn.

I keep swine only for home consumption, therefore can give G. W. H. no information on that subject.

Near Geneva, June 7. JOHN JOHNSTON.

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[For the Country Gentleman and Cultivator.]

SUET PUDDING

One teacupful of molasses; one teacupful of sweet milk; one-half teacupful of dried currants; three teacupfuls of flour; one-half to three-quarters of a cup of chopped suet, or one half a cup of melted butter; one teaspoonful of salt; one of soda; one of ground cloves; one of ground cinnamon, and one-half a nutmeg. Mix well together, put in a buttered pan and set in your steamer. Let it cook three hours, and serve with sauce, or cream and sugar. If you like it richer, add half a cup of stone raisins and a little citron. T. J. N.

[For the Country Gentleman and Cultivator.]

June---Cultivating and Hoeing Indian Corn.

> "How lovely, how charming has nature been made,
> The hill in the sunshine, the walk in the shade;
> The wild rose adorning the hedge with its bloom,
> And loading the air with the perfume of June.
> How green are the meadows, how bright is the morn,
> How glitter the dew-drops on laurel and thorn;
> How pearly and pure is the briar in bloom,
> How lovely the flowers that blossom in June."

June, with farmers, is a very important month. The operations of the farm are now moving forward with great rapidity. Everything needs attention—aye, the *personal* attention of the farmer, who is calculating upon that success which ought to attend the labors of the husbandman. The seasons never tarry for those who are tardy in their manual operations. If we neglect to plow and sow in time, or to cultivate or prune at that season of the year which has been appropriated as the most proper time for certain operations, we must sustain the loss. The great wheel of Nature is revolving with unabated rapidity, and has brought us to the long and busy days of June, laden with rich beauty, with pleasure, happiness, and replete with cheering promises for the future. In the cheering promises of June, the faithful husbandman confidently rests his hope of a future harvest. When we look abroad over our fields, and see the young corn, and wheat and other grain spreading their wide leaves to catch the enlivening sunbeams, and the gentle showers of rain—when we see our bushes, vines, shrubs and trees clothed with beauty, and unfolding their petals and filling the air with their fragrance—when we behold our young animals, colts, calves, lambs, pigs, chickens and turkeys, just beginning to try their feeble limbs, to skip and sport and play, there is in them a cheering promise, which inspires us to hope for future usefulness or good.

June, as well as all other months of the growing year, brings her duties. Let us attend to them all in good time.

Cultivating Indian Corn.

During the greater portion of the present month, the plow, the cultivator and the hoe will be the chief implements in use on the farm. Cultivating Indian Corn and potatoes will occupy a good share of the time.

As hands will be comparatively scarce in many localities, it will be an important consideration to bring our horses into the operations of the farm as much as possible. One horse and a good cultivator, like Alden's Horse Hoe, will accomplish more in a corn-field than a score of hands with hoes, providing a skillful workman hold the cultivator or horse hoe.

There is something else required in cultivating Indian Corn besides simply driving a horse, and dragging a cultivator between the rows of corn. The idea is to stir up all the soil between the rows, and make it mellow, and at the same time cut up, cover up, and destroy all the weeds and grass, and not cover up any of the hills, nor the leaves of corn. Now, if the cultivator goes hopping and jumping along, the soil will not be half stirred up as it should be, and, consequently, the work will not be half performed; and if the cultivating is not done in a thorough and workmanlike manner, there will be so much grass, weeds, &c., to cut up with the hand hoe, that the expense of cultivating the corn crop will be very much increased beyond what is really necessary.

I have never had a workman in my employ whom I could not very readily learn to cultivate corn so much better than he was accustomed to do it, that he would acknowledge at once that there is some science after all in cultivating corn. Let us run over the details.

Of course it will be necessary to adjust the cultivator to run at the proper depth, and if horses of different sizes are used, the thills and traces must be adjusted to suit them. Now, have *very light* lines to guide the horse with, unless he is very "hard bitted." If the lines are heavy, and the horse rather tender in the mouth, most workmen will keep a horse all in a foam, and will not be able to cultivate half as well as they otherwise would, or as it should be done. If a horse is very tender in the mouth, and the driver rather rough and harsh, I have always been accustomed to make a pair of lines of strong twine. Those who have never used such light material for lines when driving a tender bitted horse would be surprised to see how differently a horse would perform than when driven with heavy lines. Let the lines be adjusted, as to length, so that they will pass around the workman's body. They should not be very tight, nor too slack. Now, grasp the handles of the cultivator firmly and drive the horse with the body, with the lines around it, by turning it to the right or left. To a beginner it may at first appear a little unhandy and awkward; but after a little practice he will discover that he can drive truer, and worry a horse far less, with the lines around his body, than by endeavoring to drive with the lines in one or both hands.

Then here is another very important consideration. A great many men who are very poor teamsters will rein a horse, unconsciously, directly on a row of corn, and then abuse and jerk him by the reins because he goes where he was reined. But by having very light reins for driving, a horse that is very tender in the mouth can be guided with greater precision, and an ill natured driver will not be able to jerk him but very little.

Now, the workman should keep his eye on the feet of the horse, and the rows of corn each side of his feet, and on his cultivator, all at the same time. A little practice, with a determination to perform a job correctly, will enable him to do the work well. It is important to run the horse hoe as close to the rows of corn as is practicable and not root up nor cover up the corn.

If the rows are as straight as they ought to be, and the soil is in good condition, I think it is always better to run but once at each time of cultivating between the rows, and then go through the other way. But if the rows are not of a uniform distance apart, so close in some places that the workman must raise the horse hoe out of the ground lest he tear up a row of corn, and so far apart in other places that the horse hoe will reach but little more than half way from row to row, it will be necessary to run twice between the rows. Twice between the rows is not objectionable, only as it consumes time, in some instances, to little purpose.

When I was accustomed to cultivate corn, it was a rare thing that I touched the lines with my hands, even when turning around at the ends; and the horse would be turned around with so much precision, that he would not break down one hill in fifty.

The Way to Hoe Indian Corn.

Judging from the manner that a great many men work among the hills of Indian corn, we would suppose there were no roots, or that it needs severe root pruning. But the soil is full of roots, and they often extend from one to two feet from the hills on each side, and often fill the entire soil, and if a hand-hoe were struck in the soil near the hill, it would cut off a score of them. Now, if those roots were not necessary, they would not be there; and if they promote the growth of the plants, the plants will be injured by cutting them off. Some men, when hoeing corn, strike their hoes in the full length all around the hills, and dig and loosen the soil three or four inches deep, as close to the hills as they can work with a hoe.

Now, let the roots of a hill of corn be examined carefully after such treatment, and it will be seen that a good proportion of the roots have been cut off; and as a consequence, the growth of the corn will be retarded very much. So in plowing out corn, when the furrows are turned away from the rows, the corn is injured by severe root pruning, far more than we are wont to suppose.

I have known men to have small iron-toothed rakes, made on purpose for dressing out Indian corn with, which they would draw directly through the hills several times. Of course, every root that did not run in the same direction the rakes are drawn, would be torn in two, and in many instances whole hills were so much mutilated at the roots, that they would not recover from the injury received in several weeks. Indian corn needs no root pruning.

My practice in hoeing Indian corn is, to make the horse-hoe perform about all the labor. Of course we go over it all, and pull up all grass and noxious weeds among the corn—not cut them up with the hoes, lest we cut off too many roots of the corn. When there is a lot of small grass or weeds among and around the corn, thrust in the hoe at least a foot and a half from the hill, and with a sudden jerk bring a large hoe-full of earth about the corn; and if it is performed skillfully, with a quick motion, but little earth will be necessary to knock over and completely cover up all small weeds and grass. The surface of the ground should be left as nearly level about the hills as is practicable. Boys, and some men also, will haul several hoe-fulls right up against the corn, and leave it there; and if the ends of the leaves should be buried in the soil, they pass on and leave them thus. This is decidedly wrong.

Hilling, against Level Cultivation.

The propriety, or impropriety of hilling Indian corn, depends entirely on circumstances; and it is important to know when it is best to hill it, and when it is *not* best to hill it. Under certain circumstances, more corn may be raised per acre by hilling it well, than by level cultivation, while under other circumstances the amount per acre would be greater by level cultivation.

Hilling Indian corn and other plants originated ages ago, before the surplus water was carried away from cultivated fields in drains; and it was found to be a great improvement in the cultivation of hoed crops to raise little mounds of earth for the hills, in order to elevate them above the soil that was thoroughly saturated with water. When the cultivation was level, the roots were obliged to stand almost entirely in the water, and of course the crops were amazingly small; but by forming ridges and hills, the roots were raised somewhat above the water, and of course the crop was increased in proportion to the dryness of the soil. But after farmers had learned some of the benefits of draining, their experiments proved very conclusively, that Indian corn rooted better, and would produce more grain per acre, when the soil was kept about level, than when thrown up into ridges and hills.

The conclusion then is, if the soil has not been thoroughly underdrained, where it is at all disposed to be wet, hilling Indian corn, potatoes, or any other plants, will be attended with decided benefit to the crop; whereas, on the contrary, if the soil is naturally so porous as not to need underdraining, or if it has been underdrained, level cultivation will be better than hilling, because a greater range is provided for the roots, and they will strike deeper and find and take up more nourishment, and of course a greater crop will be produced.

Some farmers have become so firmly attached to hilling everything, under all circumstances, that no argument can induce them to give up the plow, among their Indian corn, for the cultivator or horse hoe, nor to abandon hilling for level cultivation. I know some farmers in this region who will not use a cultivator or horse hoe, even if it were given to them, unless they could go through their corn again with the plow and hill it well.

I would suggest to such farmers that they experiment a little with a few alternate rows in hilling and level cultivation, in order to satisfy themselves more fully with regard to the merits of the modes of cultivation.

I have experimented, in years past, in hilling and level cultivation, and I am well satisfied that where the soil has been well drained, Indian corn will produce more per acre, and keep erect longer and better without hilling it than when it is hilled.

Brace roots are always sent out just at the surface of the soil, and if the cultivation is about level, they become rooted so firmly in the soil that they afford a stronger support to a hill than they do when they are on the top of a large hill or mound of earth. S. Edwards Todd.

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To Keep Plows Bright.—The moment the plow comes from the field after use—for every good farmer brings his plow in after a a job is done, and does not leave it in the field—grease the bright mouldboard and other parts with any kind of cheap grease, which has no salt in it, or with lamp oil. The latter may be best where mice frequent, unless a little arsenic is worked in with the grease, which would soon settle all accounts with these vermin.

The Curculio---Small Fruits in New Jersey.

Having noticed some extracts from the proceedings of the Fruit Grower's Association of Eastern Pennsylvania, on the subject of the Curculio, and the means of preventing its depredations, in which I am represented in advocating the method of jarring off on sheets and killing, as saying "that a single tree the first morning afforded three hundred." I wish to correct an error in that report. The statement made by me was, "three hundred had been destroyed of a morning, and a less quantity for several days succeeding, until they entirely disappeared, and the result was from 30 to 40 bushels of luscious fruit,"—not from a *single tree*, but from all the plum trees on the farm, amounting to some 40 or 50.

It requires great vigilance here to secure a moderate yield of plums, from the ravages of the Curculio, which have also attacked the few pears that escaped the heavy frost; the Seckel, Bartlett, and others of the most certain bearing kinds, are generally punctured, and will produce but a small quantity of perfect fruit.

I have had my attention called to another insect somewhat similar and about one-fourth the size of the Curculio, darker in color, hard shell, and a long proboscis, preying upon the strawberry buds and blossoms by piercing the stem a little below the calyx, destroying in some places, from one-half to two-thirds the blossoms and small berries; yet from the large quantity planted, and the increased attention to cultivation, there will be a good supply of the fruit which is now commencing to ripen

Raspberries of all the leading sorts, have stood the winter well; are filled with fruit buds and making a vigorous growth of foliage, and give promise of an abundant yield.

Blackberries are doing well. The Dorchester being the earliest and most hardy variety, is now in bloom, and every hill in perfect condition. The New Rochelle, which is relied on for the main crop, has a much better show of fruit than last year, yet the vines in some places have not stood the winter well. The Cut-Leaved, or Rubus Lascineatus, is still later in ripening, perfectly hardy, and is making a fine show of fruit buds.

The crop of small fruits will go far towards supplying the deficiency in those of larger growth, such as Apples, Pears, Peaches, and Plums, all of which will be very scarce here this season. William Parry.

Cinnaminson, N. J., 5mo. 25th, 1861.

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Cup Cake, Corn Bread and Baked Beans.

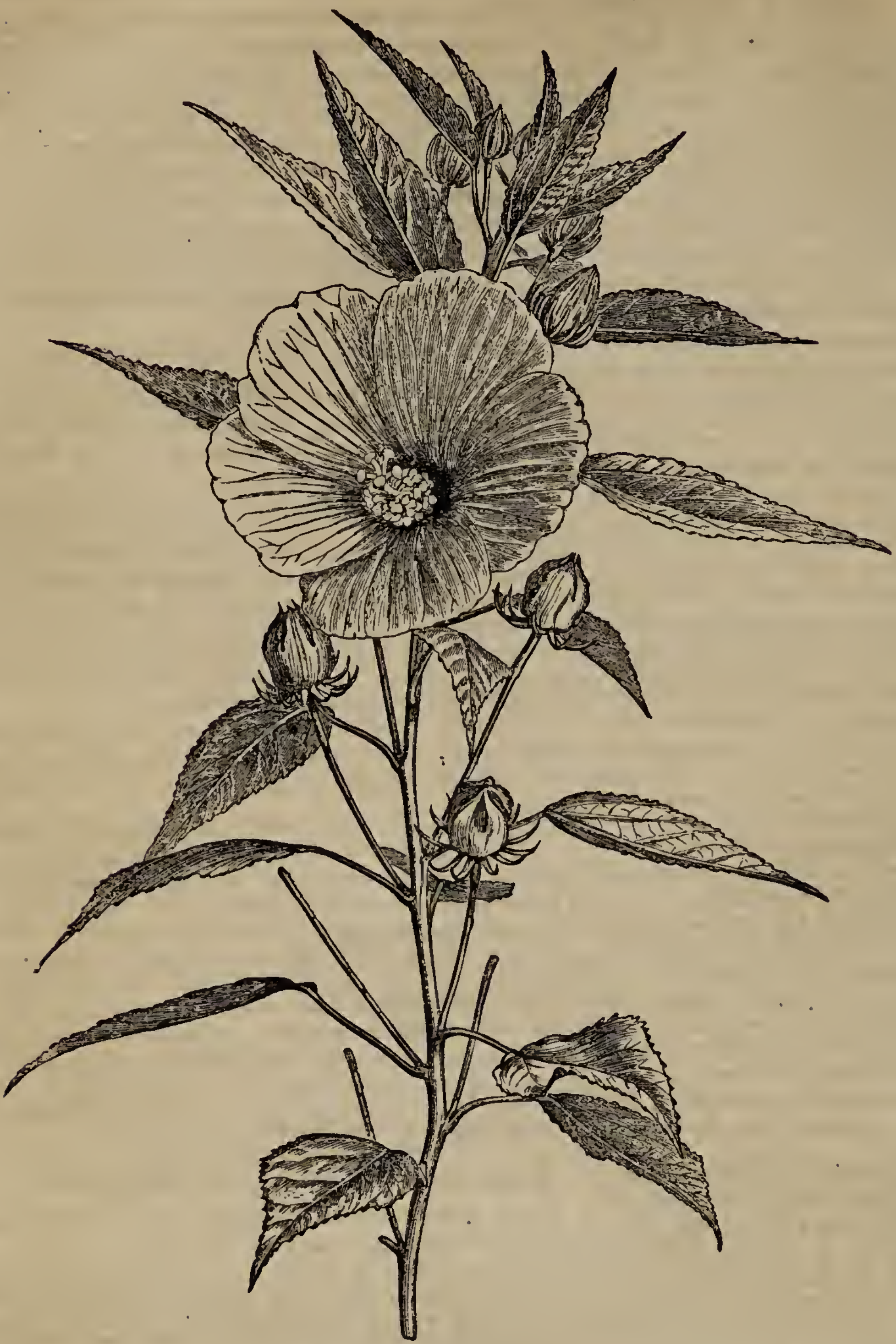
Mrs. E. D. Kendall of Reisterstown, Md., furnishes the following recipes to the American Farmer:

Cup Cake.—First of all get a tinner to construct a cake baker, as follows: Eight to ten tin cups, the size of an ordinary teacup, without bottoms, and flaring at the top. Have these soldered in rows to a sheet of tin, and the machine is perfected. By this means you insert into, and remove from the oven, all the cakes at once. Mine cost 31 cents, and has been used once a week for six years, and is still in good condition. For the cake, one cup of sour milk, two cups of sugar, one cup of shortening, a heaped teaspoonful of saleratus, teaspoonful of salt, and grate in half a nutmeg; add four eggs well beaten, and sift in flour, stirring to a stiff batter. Put one tablespoonful in each cup, and bake twenty minutes in a moderately hot oven.

Corn Bread.—The meal ought to be fresh ground, and coarser than that generally used. Take two cups of sour milk, teaspoonful saleratus, one tablespoonful sugar, one tablespoonful ginger, teaspoonful salt, half a cup of flour, and a tablespoonful of lard; add the meal, stir thoroughly to a stiff batter, and bake at once, in a shallow dripping pan, three-quarters of an hour.

Baked Pork and Beans.—Have nice, clean, white beans put in soak in cold water over night. Take a piece of fat side pork, parboil fifteen minutes; then place it in the pot with the beans, which ought to have been cooking an hour. Boil the pork and beans together until the beans are perfectly soft, then remove them with a skimmer to the dripping-pan, and make an island of the pork, in the center, having first cut the rind with a sharp knife a quarter of an inch deep, in delicate parallel lines. Bake three hours in a moderate oven, and serve hot.

THE ROSE-FLOWERING KETMIA.



In the grand series of vegetable life, there are families, several of the varieties of which attract attention chiefly by their ornamental value—as for example the *Gentianeæ*, which, sometimes of humble growth, and sometimes stately and vigorous in size, generally produce flowers of rare beauty and bright colors—or, again, the *Primulaceæ*, several kinds of which constitute in so great part the characteristic charm of the Alpine flora; or the *Ericas*, which furnish among others the numerous kinds of heath; also the Rhododendrons and Azalias, with their innumerable varieties, and so on. Other families, such as the *Cruciferæ*, the *Leguminosæ*, and above all the *Gramineæ*, play an important part in industry, and in the support of man and beast. But few families unite, like the *Malvaceæ*, plants of an immense industrial importance, as the cotton plant; of great medicinal value, as the mallow; and, at the same time, those which constitute rich ornaments in horticulture. This class, (the *Malvaceæ*,) finds representatives as well in the humblest of gardens, as in the most expensive hot-houses; for, thanks to their distribution over nearly the whole surface of the earth, many of them suit our climate very well. We shall probably interest amateurs fond of plants of easy culture, by recommending to them the Rose-flowering Ketmia, (*Hibiscus roseus*,) which possesses with great beauty, sufficient hardiness for cultivation here (in France,) in open air without fear of failure.

Although the *Malvaceæ* constitute one of the most cosmopolitan families in the vegetable kingdom, the number of their varieties and kinds is nevertheless much the more considerable towards the tropics, diminishing as we proceed thence to the poles. America is richer of them than the old world. The family has been divided into the Malope, Malvea and Hibiscus tribes, to which last belongs the variety shown in our engraving. It is especially remarkable for its large and numerous single flowers of a most beautiful deep rose, springing up from the axils of the leaves upon long peduncles articulated at the upper end, from which the fruit detaches itself on reaching maturity. The plant attains a height of between four and five feet. The engraving is drawn upon a scale of one-fourth the natural size.

For the above facts we are indebted to a late article in the *Revue Horticole*, which as noted above, recommends this plant for open air culture, stating that it has thus succeeded very well at the botanic school in the Jardin des Plantes.

Management of Sheep at Shearing.

When sheep are sheared, as soon as the fleece is off, take a stiff brush, dipped in a solution of salt and soap (whale-oil soap is best,) in water, and rub them all over with a saturated brush, which will produce a white lather or foam. This stimulates the skin to redness, and prevents the animals from taking cold; it loosens the scurf, and promotes the future growth of the wool, and also improves its quality. And the application is a sure exterminator of the vermin. For want of the brush, a woolen rag might answer the purpose. The application, if used, will be found productive of many good results.

C. J. ROBINSON.

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Staggers in Horses.

A townsman, having a horse badly affected with this disease, the animal was bled copiously in the mouth when the attack was on. This was six months ago, and the staggers have not since returned. We do not recommend the remedy as a specific, but merely state the satisfactory result in this instance.

HAMPDEN.

[For the Country Gentleman and Cultivator.]

FARMING IN THE ISLAND OF JERSEY.

MESSRS. L. TUCKER & SON—I beg to offer a few remarks on Jersey farming, which doubtless will be interesting to some of your readers.

The high rent of land in this Island, renders it necessary to be very careful and economical in the management of all the details of cultivation, in order to get a living. The price averages from £4.10 to £10, ($22 to $50) per acre—the generality of good land fetching from £6.10 to £7, with farm house and offices. Those having farms near town employ them for dairy purposes, keeping cows for the supply of milk only. Those residing at a distance convert their milk into butter, the sale of which forms the principal item of the farmer's income. The size of the farms are from 2 or 3 acres up to 30. There are a few larger ones, but they mostly contain land of inferior quality, called *cotels*, or hill-sides, so steep that they are with difficulty worked with a spade, and then only in favorable spots. The soil is of a loamy character—no clay soils—the coast being nearly pure sand or granite rock.

The crops grown consist of parsnips, potatoes, mangolds, turnips and carrots. The rotation is made to extend over a period of five years, and is as follows: The surface of 3 year old grass land is broken up in the winter, and well manured, and in February the big plow is brought into the field; it consists of two plows, the first one being a small wheat plow to skim the surface into the trench, and drawn by three horses—then follows the big plow drawn by 8 or 10 horses, turning a furrow 18 inches wide and 18 or 20 inches deep, 12 or 14 men being required to level the surface a little, and dig the corners. The quantity of land turned in a day is 2 to 2½ acres. The land being prepared, is then planted in potatoes in 18 inch rows, or sown in parsnips. Fields too small for this method of plowing, are dug with a spade—they vary much in size, from a few perches, of which there are many, up to 6 or 7 acres—the latter would be considered a large field—there is not a 12 acre field on the Island. The parsnips are dug in November, the tops of this root being nearly as valuable for young cattle as the roots.

If the land is planted in potatoes, they are raised as soon as possible, in order to get a crop of turnips; these are sown in the middle of July, and are carted off during winter.

The land is then plowed for wheat, and sown down in clover and grass. It remains in this state three years. Many good farmers leave it only two years for the hay crop, tethering the cows on it in the spring of the third year, and then prepare for turnips, following this crop with potatoes or parsnips, and then wheat.

Any acre of land that has been well manured for the root crops, will yield from 10 to 12 tons of parsnips, 14 to 16 tons of Belgian carrots, or 40 to 50 tons of mangolds—(the weight of this crop would be greater if the leaves were not pulled for the cattle)—the cut of hay, first year's crop, if the clover has taken well, 4 tons. Second cut, same year, 2 tons. The second year it is only cut once, being fed off. The cattle are all tethered, being shifted several times during the day. The quantity and quality of wheat varies much with the season; the average of the island last year is estimated at 56 cabots of 32 lbs. each, per acre, though in some favored spots as much as 90 cabots have been obtained. The crop of wheat is generally better when the clover fails, as the wheat is often choked by the clover growing too strong. In some years the wheat does not average more than 40 cabots.

The manures used are dung from the yard, assisted with sea-weed—guano used principally for turnips, and a very little superphosphate of lime; but large quantities of sea weed are burnt, and the ashes used as top-dressing for wheat, at the rate of 7 quarters per acre, spread over previously to sowing the clover in May. The second and third year grass is manured with liquid from the tank, or covered over with sea-weed in the spring. With this latter treatment the grass is tender and sweet, and the cattle eat it very close.

The price of cows having the good points specified in the engraving* are about £25; but few, however, come up to that mark. The average of good cows is from £10 to £15 each—heifers a fortnight old realize £3 to £3 each, and heifers within two or three days of calving, say 2 years old, fetch £8 and upwards, according to the number of good points they possess, but the price seldom exceeds £20.

The quantity of butter given by a good cow is from 10 to 15 pounds per week during summer—in winter 5 to 7 pounds. Cows generally go dry six weeks previous to calving. During winter they are fed in-doors on roots, hay and straw. The parsnips are given to the milch cows; they increase the quantity and richness of the cream, the butter being of the best quality—care being taken not to give too many, as they are apt to dry the milk off. A judicious mixture of mangolds and turnips will prevent this. Preference is given to butter made in Guernsey and Alderney. In these islands it is made from the previous day's milking—in Jersey, generally speaking, it is made but once or twice a week.

Another item in the farmer's income, is cider, of which large quantities are made, the exportation amounting to some thousands of pipes annually. JAMES LEVESQUE.

We are much obliged to our foreign correspondent for the above interesting letter. He will place us under greater obligations if he will furnish us detailed accounts of the culture of the parsnip and the cabbage, which we believe are grown with great profit in the Island of Jersey.

FATTENING CATTLE.

J. Hale of Medina Co., O., remarks in *Field Notes*, that "most small farmers think they must sell their steers at 2½ years old, at from $16 to $22, at a loss of $5 or $10 per head, and sell the corn to feed them at 20 to 25 cents per bushel, and thereby impoverish their soil and themselves, notwithstanding they know or might know that the purchasers, at a cost of $5 or $10, double their money in six months, thereby appropriating to themselves all the profits and much of the labor of the stock grower. All because it is believed that it will not pay to feed in a small way."

There is no doubt that animals fully fattened, sell more profitably than those in fair growing condition, and that the money is made by the feeder, rather than the breeder, in most cases, of the sale of young cattle. This need not be so. Grain can be ground and cooked even on a small scale, at no great expense, and there is no imperative necessity of expensive fixtures and buildings, in order to fatten stock. We must make them comfortable, but interested and kindly attention will do that, with only rails and a straw pile for material, and without it, the best stables and fixtures are worth nothing.

NUTRITIVE EQUIVALENTS.—(Practical and Theoretical.)

ARTICLES OF FOOD.	THEORETICAL VALUES.						Practical values, as obtained by experiments in feeding, according to						
	Boussingault.				Fresenius.								
	Water in 100 parts.	Nitrogen in 100 parts of dried substance.	Nitrogen in 100 parts of un-dried sub-stance.	Nutritive equivalent.	Relative pro-portion of ni-trogenized to non-nitro-genized sub-stances.	Nutritive equivalent.	Block.	Petri.	Meyer.	Thaer.	Pabst.	Schwertz.	Schweitzer.
English Hay,	11.0	1.34	1.15	100	....	100	100	100	100	100	100	100	100
Lucerne,	16.6	1.66	1.38	83	....	....	....	90	....	90	100	100	....
Red Clover-hay,	10.1	1.70	1.54	75	1 to 6.08	77.9	100	90	....	90	100	100	....
Red Clover, (green.)	76.0	......	.64	311	....	....	430	....	....	450	425	....	....
Rye straw,	18.7	.30	.24	479	1 to 24.40	527 7-12	200	500	150	666	350	....	267
Oat-straw,	21.9	.36	.30	383	1 to 12.50	445 5-12	200	200	150	190	200	400	200
Carrot-leaves, (tops,)	70.9	2.94	.85	135	....	....	....	....	....	....	....	....	....
Swedish Turnips,	91.0	1.83	.17	676	....	....	....	300	....	300	250	200	....
Mangold Wurzel,	......	......	....	......	1 to 7.26	391⅛	366	400	250	460	250	333	366⅜
White Silician Beet,	85.6	1.43	.18	669	....	....	....	....	....	....	....	....	....
Carrots,	87.6	2.40	.30	382	1 to 7.84	542.1	366	250	225	300	250	270	300
Potatoes,	75.9	1.50	.36	319	1 to 9.00	330 5-12	216	200	150	200	200	200	200
Potatoes kept in pits,	76.8	1.18	.30	383	....	....	400	....	....	....	....	....	....
Beans,	7.9	5.50	5.11	23	1 to 2.8	34 5-12	30	54	50	73	40	....	30
Peas,	8.6	4.20	3.84	27	1 to 2.14	34⅓	30	54	48	66	40	*	30
Indian Corn,	18.0	2.00	1.64	70	1 to 6.55	....	....	52	....	....	....	59	....
Buckwheat,	12.5	2.40	2.10	55	1 to 6.05	93 5-12	....	64	....	....	....	....	....
Barley,	13.2	2.02	1.76	65	1 to 4.25	....	33	61	53	76	50	....	35
Oats,	12.4	2.22	1.92	60	1 to 4.08	58 11-12	39⅓	71	....	86	60	....	37½
Rye,	11.5	2.27	2.00	58	1 to 4.42	58 1-16	33	55	51	71	50	....	33⅓
Wheat,	10.5	2.33	2.09	55	1 to 2.42	38 5-6	27	52	46	64	40	....	30
Oil-cake, (Linseed,)	13.4	6.00	5.20	22	....	....	42	108	....	....	....	....	43

* Boussingault.

Nutritive Values of Hay, Straw, &c.

Messrs. Editors—Will you inform me by actual experiment, or otherwise correctly, of the comparative value of hay and the different kinds of roots, grain, straw, &c. A table showing the foregoing, if published in The Cultivator, would be read with much interest by many, as well as by myself. A Young Farmer. *Mansfield, Ct.*

As an answer to this and many similar inquiries, we give the above table, which we copy in the present instance from Flint's Treatise on Dairy Farming. With some kinds of food, the results are much alike with all the different experimenters; with others, a great difference is observed. This difference is doubtless owing to the different manner in which the food was given, its quality or state of preservation, and the care in other respects. Some animals will increase twice as much in flesh as others with the same amount of feed, and this would also affect the results. The theoretical values, as obtained from analysis, agree very nearly in most cases, as they are not controlled by the accidents of feeding. This table will prove useful for reference, and will furnish valuable suggestions, although not mathematically reliable.

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Shipment of Short-Horn Cattle to England.

☞ The Thorndale Shipment of Short-Horns to England, to which we have heretofore alluded, has now taken place. Samuel Thorne, Esq., having returned from his recent tour abroad several weeks since, at once made preparations to send out the following animals in accordance with arrangements completed by him with several leading English breeders during his absence, and they accordingly sailed by the "City of Baltimore" a week ago Saturday, (May 18,) under charge of Thomas Galbraith, herdsman to Mr. T. The list includes six bulls and one heifer, viz:—

	BULLS.	
Name.	Dam.	Sire.
2d Duke of Thorndale,	Duchess 71st,	2d Grand Duke.
3d do. do.	1st Duchess of Thorndale.	Grand Turk.
4th do. do.	Duchess 66th,	Duke of Gloster.
5th do. do.	do.	Grand Turk.
Thane of Oxford,	Maid of Oxford,	do.
Imperial Duke,	Oxford 13th,	2d Grand Duke.
	HEIFER.	
4th Lady of Oxford,	Maid of Oxford,	2d Grand Duke.
Also One Bull Sold to go to Ireland, and Shipped from New-York, April 19th.		
Hero of Thorndale,	Lalla Rookh,	Grand Turk.

Here is an aggregate of eight animals which we shall spare with great regret from the Thorndale Herd and the Short-Horns of the country. But their exportation is by no means "carrying coals to New Castle;" for it is precisely such blood that is now in demand in England, where breeders have often regretted that the "Yankees," with such long purses and daring bids, should have succeeded in carrying off so many of the gems of the best herds. In the reigning confusion here, however, they would hardly have commanded the attention at present which their merits and lineage deserve; and we await with no less confidence than pleasure the verdict our British friends shall pass upon their breeding and "bringing up."

To have prophecied ten years ago that by this time we should be re-shipping Short-Horns to the mother country, would scarcely have been rated as a prediction of very great probability; and yet those who watched the succession of purchases made by Mr. Thorne, and his subsequent combination of the Morris herd with his own, were quite prepared for the occurrence of the present event. It is worthy of this particular notice for two reasons: as affording evidence in the alacrity of English breeders to procure these Short-Horns, of the genuineness of the estimate they placed upon what they have heretofore sold to us, and as proving to other countries, and to other parts of our own country, that as good Short-Horn stock may now be obtained here in our midst, as by going to the very district from which it sprang. And this foreign demand will not stop here, if our farmers do not wake up from the apparent lethargy into which they seem to have fallen just now; and by preparing themselves to pay with sufficient liberality for what it has cost so much enterprise and money in the first instance to import, *out-bid* the demands of breeders elsewhere. The history of Short-Horns in this country is a curious one, large prices and quick demand having alternated now and then with a time of comparative neglect—sure afterward to be deeply regretted and atoned for in prices still higher, and a demand still wider.

Nevertheless we can scarcely hope that any warning from us will be heeded at present, while all interests are comparatively swallowed up in the one great and justly engrossing question that involves our National existence. Still, if there are any who are inclined to think that "we already have 'improved blood' enough in our stock both at the East and West," and that consequently we may safely look on with unconcern when the transportation of our best begins,—we cannot forbear reminding them how few there are who yet pay any judicious attention to the character of the stock they are breeding, in proportion to the vast number who actually sell off their select animals to the drover and butcher as regularly as every year comes around, and keep only the "culls" at home to stamp defect and deterioration, instead of improvement, upon coming generations! Is there no effort necessary to counteract the results that must inevitably follow such a course of procedure?

We desire, indeed, to have Improved Stock—whether Short-Horn, Hereford, Devon, or Ayrshire—accessible to the farmer at reasonable prices. And this can never be permanently the case, unless there is a demand sufficiently wide to encourage local breeders, who can in turn keep up their herds from such establishments as those of Thorne, Alexander, Sheldon, and others in other breeds, without the cost and risk of importing for themselves. The truth is that farmers are to have a certain market, we believe, for all they can raise or sell for a year or two to come; and it is now, therefore, precisely the time in which they should avail themselves of whatever financial stagnation may elsewhere exist, to secure better farm stock of every kind. And we sincerely hope, if our friend at Thorndale makes any farther shipments to England, that his customers there may first have to out-bid a competition from our own farmers, as animated as our importers have always had to contend against at the great sales abroad.

[For the Country Gentleman and Cultivator.]

Effects of the War on Agriculture---Tobacco Growing.

Messrs. Tucker & Son—As during the *five years* at least, of the unhappy, un-civil, intestine war, already inaugurated in our hitherto prosperous and happy country, it is little likely that expenditures of either time or money for purely ornamental purposes will anywhere find favor among your rural congregation, I deem it advisable to adopt only the *utile* in all communications, leaving the *dulce* in the background until peace and prosperity shall again resume their empire over a Union as wide as that so lately broken and demoralized by the machinations of fanatics and political demagogues.

It is a very common, but entirely erroneous supposition that the organizing of a large military force, such as New-York, Pennsylvania, Ohio, and other Agricultural States, have sent, or are prepared to send into the field, must necessarily interfere to a ruinous extent with rural pursuits. Of the levies already under arms from the three great Agricultural States above named, less than two per cent. of the whole force come from the farm; and were fresh levies to be called into service every year, equal in numerical force to those already in the field, and thus continue for ten years to come, the per centage taken from the cultivators of the soil would not reach twelve per cent.; not but that the agriculturists are every whit as patriotic, and just as ready to lend their aid in maintaining the integrity of the Union as any other class of men in our whole country; but so long as the exigencies of the case do not require their services in the "tented field," they argue justly that they are better subserving the true interests of the country and community by pursuing diligently their peaceful avocations.

Should it become a necessity to maintain the present war footing of the Federal Army for the term of ten years to come, there is no shadow of reason why the Northern Agricultural States should not maintain their quota of troops intact, and at the same time go steadily on acquiring wealth and prosperity.

In addition to the usual products of these States, which for years to come will find a ready market at advanced rates, there will, within another twelve months, be an imperious demand from abroad for another staple, which the region now supplying it cannot meet, but which the States of New-York, Connecticut, New-Jersey, Pennsylvania, Ohio and Indiana *can* meet to the fullest extent of the demand, and that too without materially interfering with their already established agricultural pursuits.

It has become a well established fact, that Connecticut can produce *Tobacco* of as good quality as can be grown anywhere in this country, and very generally superior to all other grown in the United States. And just as good tobacco as the soil of Connecticut will produce, can be grown in any other of the States enumerated; besides, even the best Connecticut staple may be greatly improved by proper culture and curing.

Tobacco is by no means the delicate plant or exhaustive crop it has been so generally represented and universally believed to be. The facts that it very frequently scorches to a crisp, in, or at the third planting entirely exhausts the light sandy soil of Virginia, or the obdurate clay of Eastern Tennessee, red as a burnt brick with peroxide of iron, do not argue in the least that such results will follow in the deeper, richer and more retentive soils of the above mentioned States; and as tobacco is a crop that, after coming from the seed-bed, may be made and housed in three months, it can be grown between spring and fall frosts as well in Connecticut or New-York as in Virginia, and as the preparation of the ground and planting out, comes in between corn planting and "haying time," and the cutting and hanging between wheat and corn harvest, it fills in those two leisure spells with most profitable employment.

Take the whole range of Northern territory above mentioned, and the average yield of corn the first season on newly cleared land, will not be above thirty bushels per acre. Allowing one dollar per bushel for the corn, and ten dollars for the fodder, and then deducting $15 for preparation, culture, harvesting and housing, and we have $25 as the nett proceeds of the acre. Planted in tobacco the first year, the average yield of fine leaf suitable for the Dutch or Russian markets, would be 900 lbs., which at the minimum rate of eight dollars per hundred, would give $72 per acre, while the stems and grade leaf, suitable for the German market, would always considerably more than pay all expenses of culture, curing and conveying to market. The second crop on the same ground, without any manure, would be five per cent. less. With suitable fertilizers at a cost of eight dollars per acre, and properly applied, the second crop would be increased ten per cent., and the third year the land would be in better condition to produce a maximum crop of corn than when first cleared.

There are portions of Connecticut, New-York and Pennsylvania, where, with proper management in culture, curing and sorting, tobacco every whit as valuable in any market as the celebrated staple of the *Vuelta Abajo* of Cuba, can be easily enough grown.

Being in possession of recent and reliable tobacco statistics, both foreign and domestic, and having considerable knowledge of the cultivation of the "weed" in America, and elsewhere, I shall, by permission, have some further observations to make when next at leisure.

Baltimore Co., Md., May 27. R. C. KENDALL.

[We trust our correspondent will continue the subject as proposed; the readers of the Country Gentleman in many localities are especially interested therein, and could not fail to profit by his treatment of it. Eds.]

[For the Country Gentleman and Cultivator.]

SWEENEY IN HORSES.

Eds. Co. Gent.—I have noticed in your paper, several articles upon the subject of Sweeney in Horses. Several different cures are given, but no one giving the cause of the disease.

Sweeney in horses is caused by diseased fascia that covers the muscles of the shoulder, which causes the muscles to shrink and perish. Any thing that will restore the healthy action of the fascia, or remove the dead fascia so that a new one can grow in, will cure the horse, and the muscles will soon fill out plump and full.

My remedy is to make an incision through the skin, about one inch long, at the point of the shoulder blade; loosen up the skin by inserting the finger, and work in about a tablespoonful of salt. In about ten days, tap the shoulder to let the puss out, wash out well with castile soap, and in a few days your horse will be perfectly well.

Cleveland, O. M.

[For the Country Gentleman and Cultivator.]

TOBACCO---QUID No. 2.

Editors Co. Gent.—Having in a previous communication shown that tobacco of a superior quality, can be successfully and profitably grown in several of the Northern States where it is not now produced; and that it can so be grown, without materially interfering with the production of the regular grain crops of the country; I will now by your permission, give a few plain hints relative to its culture, cure and manner of packing, and some brief statistics in regard to its foreign consumption and demand.

In almost all localities north of the Delaware, a hot-bed in which to propagate the plants, will be a necessity, and as the plants should have a two month's growth before transplanting, about the first of April will be the proper time for sowing. The seed should be sown thinly in order to produce strong, stocky plants. After corn-planting, prepare the tobacco-field by putting it in fine tilth as for corn and finish by turning two light furrows together, forming a moderate ridge, four to four and a half feet apart. Let the planting out follow the preparation as soon as possible, that the young plants may have a good start of all weeds and grass. The usual manner of planting out in the south, is to carry the plants in baskets from the seed beds to the field; and then, while one hand passing between two rows, drops them at proper intervals along the ridges, two others follow and plant them. This is a slovenly and injudicious plan, for as the young plant is very tender and liable to injury, quite one-fifth, taking the general average, suffer death by violence, or die a lingering death begotten of carelessness in planting, thereby rendering a second planting necessary, the expense of which is nearly equal to the first. A much neater, and far surer method is, for each planter to have a field-tub that will hold two thousand plants without crowding. Into this tub put four parts rich woods mold, three parts fine manure from the cow stable, and one part superphosphate of lime, the whole quantity being sufficient with the addition of water enough to make the whole into a rather thin mortar, to fill the tub to the depth of six inches. Place the plants carefully, roots downwards, in the tub as they are taken from the seed bed, and being transferred to the field, each planter having an ordinary water bucket with two or three inches of the above liquid in it, places therein as many plants as it will conveniently hold, and with a common garden "dibble" inserts the plants along the ridge two feet apart, exactly as a careful hand would transplant cabbages. By pursuing this course, and taking advantage of a cloudy day, not above one plant in five hundred will fail to grow.

By the time the first corn dressing is done with, the plants will be well set, and an interval of leisure is afforded for cultivation which is best performed by a wide cultivator running close to the ridge, being careful not to touch the plants. Any weeds or grass making their appearance close to the plants should be removed by hand.

The second cultivation may be given after harvest—a few days earlier or later, as convenient, makes little difference. Topping should be done with a knife, cutting the seed stalk and two of the top leaves with it, just before the flowers open. Cut the crop about the first of September, being particular that no frost touches it, as it will thereby be ruined. House it as soon as wilted, and by no means expose it to rain, dew, or more than a few hours to a hot sun, after being cut. Hang it on poles one foot apart, and the plants just clearing each other. Tiers of poles above each other far enough to allow the tops to swing clear of the butts below. If the tobacco house is well ventilated and dry, the crop will be fit for stripping in ten weeks, and should be done at odd times in damp, stormy weather. Assort the leaves into three qualities, and pack in bales or boxes, numbering according to quality.

I give here an extract from a letter lately received from a brother, for many years a resident in Russia. In writing of American tobacco he says:

"The cultivation of tobacco in Russia has been almost entirely discontinued, and hereafter the Empire must look to the United States for its supply, which for the last seven years has averaged 225,000 *poods* of 36 pounds to the *pood.* Not more than 460 *poods* are however shipped direct to Russia, the large balance being brought indirectly through England, Holland, Belgium, Prussia, and the Hanse towns. Why do not our tobacco shippers bring the material direct, and give American growers and vessels the benefit of the trade? Some small consignments of Connecticut tobacco have found a market in St. Petersburg, and established a character for the Yankee staple above that of any other growth ever imported into this country.

"As 'chewing' is not a Russian habit, there is no scale of duties that applies to that form of the 'weed,' and consequently we foreigners, who have acquired the habit at home, get our supplies at raw material rates. The average consumption of tobacco in the Russian Empire proper, is two and a half pounds per annum for every adult person, making a total of not far from 71,000,000 pounds, the excess over the imported from the United States, having heretofore been supplied from the Crimea, and Danubian provinces. This supply now failing, must be looked for in some other direction."

As the falling off in Cuba in the production of tobacco, is even more marked than in the hitherto tobacco-growing regions of this country, and as the demand is steadily on the increase, markets will of course rule higher, and if the people of the states mentioned in my former communication, are not within the next three years, prepared to supply the increased demand, it will not be because of their inability to do so. R. C. Kendall.

[For the Country Gentleman and Cultivator.]

SEEDING DOWN LAND.

Messrs. Tucker & Son—How much seed shall I put to the acre? is often asked by those who are about to lay down land for mowing or for grazing, and have I seen in a back number of the Co. Gent. a reply by your esteemed correspondent John Johnston, giving his experience as to the quantity which, all things considered, gives the best return.

The amount, if I mistake not, is ten to twelve pounds clover, with four to six quarts of timothy seed, per acre. This amount of seed will give a good crop of hay in Maine sometimes, it is true, and probably in other places, but it will be very coarse, and it will take two to three years to form a good sod, simply because there is not seed enough to start roots enough to occupy all the ground. Formerly this amount was thought sufficient on new cleared land, though less clover and more timothy (*Phleum pratense*) was used, but on tilled land it was almost a stereotyped process as far back in boyhood as I can remember.

But enterprising and intelligent farmers are experimenting with various kinds of seed for forage, and varying the relative proportions, but generally increasing the aggregate amount per acre, and in nearly every instance the decision is that we have not used near seed enough to obtain the best result.

From the many illustrations at hand one man's experience will suffice to illustrate the necessity and advantage of using at least twice the amount above indicated.

Mr. C. T. Burnham, Strong, Me., a few years ago commenced experimenting with clover and timothy, and has continued till now, and for several years he uses not less than twenty-five to thirty pounds of clean clover seed, and four, six, or eight quarts of herds grass seed to the acre, varying it to suit the soil or its adaptation to each kind. He wants not less than thirty pounds clear clover for hay growing, or if to be saved to ripen for seed.

The result has been very encouraging. A few words will show its success. In 1858 a piece of land on which a young growth was cut off, burned over, sowed to spring wheat, and seeded in the spring with the above amount of seed, gave, on 2½ acres, *nine* loads of fine hay, drawn by four oxen, in 1859, and on two acres of the same in 1860, four hundred pounds of clover seed per acre.

On land by the side of this, cleared, sowed and seeded at or in the same year by a neighbor, with eight to ten pounds of clover, and four to six quarts of timothy, and purchased by Mr. B. in the fall or spring following, there was not over two-thirds the amount of grass for hay, and this was, as he said, almost as coarse as raspberry bushes, while that with twice the seed per acre was fine and beautiful hay.

Mr. Burnham says the grass holds out in proportion to the above illustrations, where he has kept it in mowing, very generally; and, as far as he is able to judge, if used for grazing, produces feed in the same ratio, because the ground is more nearly all occupied at once to the exclusion of valueless and noxious weeds which are ever and anon ready to make their unwelcome appearance in our hard upland soil, to the exclusion finally of more succulent herbage.

The only rotation sod land like this gets is seeding, mowing and grazing as long as either will pay a fair return for the labor required.

Elm Tree Farm, Maine. O. W. TRUE.

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[For the Country Gentleman and Cultivator.]

Does Keeping Poultry Pay?

Raising poultry for the table, and for the sake of eggs, is a branch of farming which, like every other branch, always depends on *circumstances*, or the manner in which the business is conducted, in order to make it a profitable or paying business. If fowls are managed properly, their eggs will sell for much more than the food which they consume; and if a farmer has adopted a judicious system of management with fowls, it will require but a small expense to raise two or three hundred nice fat chickens. But it would be folly to attempt to keep a hundred hens where only fifteen or twenty ought to be kept, and to feed their poultry as many farmers are in the habit of feeding them, so that some get twice as much as their stomachs can digest, while others can only get a few kernels of the scanty meal, it cannot be expected that they will flourish so as to return to their proprietor, a good compensation for his grain and labor.

I have seen people attempt to keep their hens on oats and buckwheat, by feeding fifteen or twenty of them about one pint of grain, twice a day. One of my neighbors, a year or two ago, invited me to look at his hens, as he feared he should lose them all. He said he had been trying to keep them on oats, but did not believe oats were good for them. He had about twenty lean, sickly things, which looked like starved crows. He said he could get only now and then an egg, and he could never have any success with poultry. To be brief, he fed them a pint cupful of oats, three times a day, which, when apportioned to them all, would be about enough to satisfy the first cravings of hunger.

We raise more or less poultry every year, and sometimes we have several hundred fowls, and I have always managed with them according to the preceding directions; and we sell every season more than eggs enough to pay for all the grain which they consume at a fair price, making no account of the chickens and hundreds of eggs which we eat. Poultry will pay well when they are properly managed.

Lake Ridge, Tompkins Co., N. Y. S. EDWARDS TODD.

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[For the Country Gentleman and Cultivator.]

Cleaning Grain or Grass Seed.

In cleaning grain you can regulate the amount of wind from the fanning mill entirely, by opening or closing the two air holes on each side of the mill.

For cleaning wheat or timothy seed, you can turn with the same speed, if you shut the air holes according to the weight of the grain—i. e., the lighter the grain the closer the blinds must be shut.

In cleaning timothy seed you want the short lively shake, which you cannot get without turning rather fast, and by shutting the air holes *tight*, you cannot blow the chaff or seed out.

If fanning mill makers knew that, I think they would put blinds on both sides of the posts, or four blinds instead of two. I have put the extra blinds on my mill, and it works right. W. P.

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RHUBARB WINE.

It is now pretty evident that there will be but a very light crop of currants in this section the present year, and consequently little or no wine will be made from this fruit. Perhaps a good substitute will be found in the rhubarb. Attention has of late years been drawn toward this article, and in England rhubarb wine has been made to a considerable extent. Comparatively few trials have been made in this country, but some persons have succeeded in producing a wine which has been favorably spoken of by those qualified to judge of the article.

It may be recollected that Mr. B. P. Cahoon of Kenosha, Wis., has been somewhat distinguished for the manufacture of rhubarb wine, a sample of which was sent sometime since to the Fruit Committee of the Massachusetts Horticultural Society, and was submitted for analysis to Professor Horsford, whose report on the subject appears in the Transactions of the Society for last year. Being unable to make room for the whole of the report, we take from it the following extracts:

"The wine has the hue of pale brown sherry, and a bouquet of taste which several connoisseurs of wine to whom it has been submitted pronounce to be peculiarities of the same wine. Some have perceived also a resemblance to Teneriffe. It is dry, slightly acid, and slightly astringent. It is clear, and free from sediment. Qualitative analysis showed the wine to contain alcohol, sugar, gum, slight traces of volatile essential oil, coloring matter, tannin, (?) free organic acid combined with potassa and traces of other inorganic substances, but no oxalic acid."

The following table exhibits the composition:—

Specific gravity	998.37
Composition in one hundred parts—	
Alcohol by weight, 13.15,	13.15
Alcohol by volume, 16.56.	
Sugar,	1.80
Free acid, assumed to be malic,	.33
Potassa salt, assumed to be neutral malate of potassa,	.33
Gum, coloring matter, and other organic matter,	2.28
Inorganic residue,	.07
Water,	82.04
	100.00

A correspondent of the Wisconsin Farmer states that Mr. Cahoon made last year 3,080 gallons of wine from two acres of rhubarb. The process of manufacture is described as follows:—

"Mr. C. uses Hickok's cider mill for grinding and pressing the stalks, the operation being very similar to that of making cider. The stalks should be cut into pieces from two to three inches in length. One man can grind 100 pounds of stalks in five minutes, and in twenty-five minutes more press out the juice. One hundred pounds of trimmed stalks, *twice* ground and pressed, will make ten gallons of juice. The wine is made by mixing water and sugar with the juice, in proportion of one gallon of juice, one gallon of water and seven pounds of sugar. In one instance Mr. C. cut 48 pounds of trimmed stalks from one root, which with the usual addition of sugar and water, made 14 gallons of wine. From one square rod of ground he cut 316 lbs. of stalks, and made 75 gallons of wine! The wine is said to sell readily at one dollar per gallon, which is less than one-half what other kinds of equal quality are held at."—*Boston Cultivator.*

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TEA CAKE.

One egg; one cup of sugar; one of milk; two tablespoonfuls of butter; one-half tea-spoonful of soda and one-half of cream tartar, and three cups of flour. Melt the butter and stir with the sugar; add the egg, the soda dissolved in the milk, then the flour and cream tartar, also a little salt and essence of lemon. This makes one good sized loaf. T. J. N.

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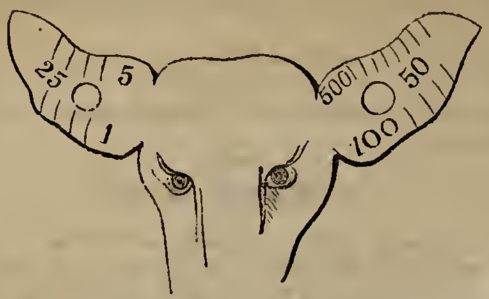
Indelible Ink.

By placing a piece of lunar caustic in the end of a quill and whittling the same to a point, any cloth, being first slightly damped with water, may be written on so indelibly that no art can remove the color.



REGISTERING SHEEP.

Messrs. L. Tucker & Son—As the sheep shearing season is at hand, when most mark or number their sheep by notches or marks on the ears, and recollecting a few years since of seeing in the Country Gentleman, a plate representing the head and ears of a sheep with notches and holes in them, corresponding with the number of the sheep, but like many of your subscribers, I have not preserved my papers in file, and have lost all remembrance of the method. Will you please, for the benefit of your subscribers, again insert the plate and explanation.

Derby Line, Vt. G. B.

The above cut illustrates the German mode of ear-marking and regularly numbering the sheep belonging to a flock, so that each individual can be distinctly registered:

Each slit in the lower rim of the right ear represents,...	1
Each slit in the upper rim of the right ear represents,...	5
Each slit in the lower rim of the left ear represents,....	100
Each slit in the upper rim of the left ear represents,....	500
The central hole in the right ear represents,............	25
The central hole in the left ear, represents, ...	50
In the above figure	
7 slits in the upper rim of the left ear, 500 each,.........	3,500
4 slits in the lower rim of the left ear, 100 each,.........	400
The central hole in left ear,..	50
4 slits in the upper rim of the right ear, 5 each,..........	20
4 slits in the lower rim of the right ear, 1 each...	4
The central hole in right ear,..........................	25
Number of the sheep,..................................	3,999

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[For the Country Gentleman and Cultivator.]

MILK FEVER IN COWS.

Messrs. Editors—In The Cultivator, vol. 9, no. 4, page 125, I see an answer by A Subscriber, to T. M. Benum of Clark Co., Iowa, in regard to the disease of cows after calving, in which I do not exactly agree. There is no doubt but that the cows Mr. Benum speaks of had the milk fever, as the disease invariably commences within two or three days after calving. The cow will first appear weak, staggering as she walks, eyes glassy, will not eat, and is in great distress.

I will give my opinion on the origin and treatment of the disease, as I have tried a great many experiments on it, and think that at last I am master of it. I have had several cases of it for the last few years, and have lost none. It originates in the calf bed. The cow being fleshy and full of blood and milk, and calving in hot weather, an inflammation arises in the part mentioned, which arrests all action of the blood, milk and bowels, and unless this inflammation is stopped, and a circulation got up, she will soon mortify.

My mode of treatment is as follows, and whoever tries it will effect a cure in nine cases out of ten. As soon as I see the cow has the disease, I take sacking, or other heavy cloth, lay it across the small of the back, and keep it continually wet with cold water from the spring, poured on by pails full. This will allay the inflammation until physic can be got to operate. Then take a handful of tobacco wet in vinegar, and bind it in the hollow of the head back of the horns, and keep it wet with vinegar, as the disease appears to affect the head very much. After this is done, commence giving physic—give one pound of Epsom or Glauber salts. This I think the best if handy, for it is cooling to the system; if not handy, take about two quarts of molasses and lard, each equal parts. After the physic has been down two hours and no operation, take a lump of chalk the size of a hen's egg, pulverize it fine, put in a quart bottle, and as soon as the cow is got in a position to give it, pour in one pint of good vinegar quickly, placing the bottle to her throat, and let it go down. If there is no operation in the space of three or four hours, repeat the last dose. Chalk and vinegar I know to be a harmless physic. Wait about half an hour, and if no operation, cord the neck and bleed about two quarts, which will greatly facilitate the operation of the physic. Give the cow all the while cold water to drink. After there is a circulation got, the cow must be fed moderately for a few days. Several cows under my observation, that had been milked for several days previous to calving, have had the milk fever, so I think it no preventive.

Prattsville, N. Y. E. M. BOUTON.

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[For the Country Gentleman and Cultivator.]

CURATIVE TREATMENT OF GARGET.

Any one acquainted with the effect of Iodine on the human system, knows its tendency to produce an absorption of the mammæ. This potent drug is the most sure to produce uniformly certain effects for which it is indicated, than almost any other embraced in the materia medica, and it is chiefly employed in diseases of the absorbents and glandular systems. (*Vide* U. S. Dispensatory.) Premising here, garget to be a disease of the nature thus indicated, it at once theoretically appears that Iodine in some form, is the legitimate and proper remedy for this malady, and in practice such treatment has signally succeeded, when all the usual remedies had utterly failed in eradicating many of the most inveterate cases of garget. Numerous authenticated cases might be cited in proof of this, one of which is very conclusive and authentic, and which was reported some years since by Dr. Eben Wight of Dedham, Mass. The Doctor says:

"Some years since I met with a fine imported Durham on the way to the butcher, the owner parting with her in consequence of her being afflicted with the garget. Said owner had tried all the usual means of cure, after which he put her under the charge of a distinguished veterinarian, who, after a six-months' attendance, discharged her as incurable. Deeming her a good subject for a treatment with Iodine, and not knowing whether it had been used in the case, I purchased her at what she was worth for beef. At that time she gave but a few drops of milk at a time from one teat; the others had ceased to yield any—the udder and teats were swollen hard. I determined to make use of Iodine in the form of hidriodate of potash, being solvent in water, and if it failed to exhibit its effects on the system, I would resort to an ointment, (20 grs. Iodine to 1 oz. hogs' lard,) applied externally to the udder and teats. I commenced by giving 10 grains of the hyd. of potash in a tablespoonful of water, three times a day, mixed in a mash of shorts and meal; and though the dose was unusually small for a cow, still, as it was giving unmistakable signs of effect, I did not increase the dose. In seven days she gave milk freely from each teat, and in three weeks was discharged as cured."

Many other cases with like results might be cited, but the foregoing will suffice to invite attention to this mode of treatment, which I trust will afford much benefit to owners of gargety cows. Iodide, or more properly hydriodate of potash, can be procured at any apothecary, and dissolved in water so as to allow about 10 grains to each spoonful of water, giving this quantity for the first doses, and increasing the dose until it gives effect on testing the urine. The iodine, when introduced into the stomach, quickly passes into the secretions, especially the urine. It may be detected in the latter by first adding to the cold secretion a portion of starch, and then a few drops of nitric acid, when a blue or purple color will be produced. If this internal application of iodine should not readily succeed in removing the cause of garget, the attendant should have recourse to the ointment above mentioned in conjunction with such internal application. If this treatment be performed *secundum artem*, a *cure* will be the inevitable result. C. J. Robinson. *Richford, N. Y.*

HINTS ON CHEESE MAKING.

Prof. **Voelcker** read at the last meeting of the Council of the Royal Ag. Society, a paper on Cheese-Making which will not appear in print until the next number of the *Journal.* But the editor of the Mark Lane Express, being present, "took notes," which perhaps was highly improper, but they are interesting and the following extract contains a number of valuable facts:

The opening fact was a suggestive one, as showing how greatly some further aid and advice was required. The manufacture of cheese, or ergo, cheese itself, is not so good now [in England] as it was five and twenty years since. And the Professor attributes this decline not to the use of bones nor the decay of our pastures, but to the echo of a want we uttered last week—that of a good dairymaid. In days gone by, the farmer's wife herself, if not, as she frequently was, her own dairywoman, had still an especial pride in its management. Now, however, she leaves such a part of the business of the farm more and more to her servants, and, as a consequence, with less care and cleanliness in its conduct. And cleanliness is above all things the first great golden rule of the art. The Professor dwelt on this at some length, demonstrating how the cheese might be utterly spoiled even before it was made—how painted pans and tubs should be avoided, as not to be trusted when washed with scalding water—though they do paint them in Cheshire—and so on. Then Then ignorance is often associated with idleness, while even where good cheese is yet manufactured, the dairywoman will be able to offer but little showing for what she does. Happy accident or established habit are her great landmarks; and it is here science tells very effectively in demonstrating directions for difference of temperature under different circumstances—preventives against cheese becoming sour—how it should be colored—and other points that the Professor will put in his own way. We may, however, venture to give some of the different degrees of temperature, as laid down with all the distinct emphasis of line and rule:—At below 70 deg. the curd remains soft and tender, at 60 deg. it takes 3 hours to rise, at 65 deg. 2 hours, at from 70 deg. to 72 deg. $\frac{1}{2}$ to $\frac{3}{4}$ of an hour, at 90 deg. $\frac{1}{4}$ of an hour, at 120 deg. it runs "like toasted cheese." Thin cheese is spoiled at a high temperature; and in Cheddar cheese the curd rises at the temperature of 80 deg. to 84 deg. After the whey is separated you may raise the temperature from 95 deg. to 100 deg., but not higher. Milk coagulates at any temperature from 60 deg. to 130 deg., but at 135 deg. it ceases. Mr. Voelcker illustrated his discourse with a number of useful tables, showing the composition of different sorts of cheese, that no doubt will be published with the paper; while he was continually sending round samples of strong and mild, old and new, good and bad, for the yet more practical ordeal of touch, taste, and smell. But, alas for such advantages! there were scarcely twenty people present, and the majority of these were lords and landlords, who had come on the business of an adjourned Council Meeting. But, we may add, for the benefit of the outside world, on the authority of Professor Voelcker, that it is a mistake to suppose cheese will only "grow" in certain places; it may, on the contrary, be made on any description of land.—That for such a purpose bones improve all lands.—That food does not influence the flavor of the cheese so much as the different systems of manipulation.—That milk varies greatly in analysis, while it soon becomes tainted when the dairy is placed near to drains, pig-styes, or cesspools, and that cheese making under such circumstances is labor lost.—That milk should not be "soured" before the process of cheese-making begins, and that acidometers are of little use.—That the Cheshire plan of making the rennet day by day is not necessary, and the custom of the same district of keeping the cheese-room dark, close, and confined, is altogether reprehensible. The store-house must be thoroughly well ventilated, or the quality of the cheese must suffer. It is a wholesome sign to see a thinking *and* a careful man like the Professor attacking *mos pro lege* as strongly as we have intimated.

[For the Country Gentleman and Cultivator.]

ABOUT FEEDING OATS TO SHEEP.

Eds. Country Gent.—In answer to Mr. Daboll's inquiry about feeding oats to breeding ewes, I would reply by saying I have fed about 85 breeding ewes through the last winter and spring, up to the 4th of May, at the rate of one-half pint per day, and that my lambs never did better; they were all large and strong when dropped, requiring no aid at first. I would further say that I have lost but one lamb the present season, and that was owing to a deformity in its neck, which prevented it from drawing the milk.

Perhaps it would not do to feed ewes who were poor in the fall, at the rate Mr. D. fed his. My sheep were all in high order at the commencement of winter, at which time I began to feed oats.

As I have always been successful in raising lambs when the ewes have been rightly cared for, in the first place, I would state that I manage to have them come about the 6th of May, when the ewes are not fed with grain through the winter. By so doing, I can turn them to grass a part of each day for about two weeks previous to dropping their lambs. At the same time, I give them hay night and morning, and they seldom fail in having milk. They should be brought in every night, and in every rain-storm they should be put into sheds with plenty of room. Lambs never should go with a large flock until they are three or four days old, but should be confined in a small enclosure, until able to follow in large fields. W. M. C.

Hebron, N. Y.

Messrs. Tucker—Noticing an inquiry in the last Co. Gent., from your correspondent Mr. H. Daboll, regarding the feeding of oats to sheep, I send you the following extract from a correspondent of the N. E. Farmer, which may throw some light upon the matter.

Salisbury, Conn. W. J. P.

The inquiry, "will unground oats hurt sheep?" also the statement that the Henniker farmers have lost a number by their use is truly a new idea. I cannot give the reasons which you ask for, in the affirmative; in fact, I know of none, and furthermore, it would be decidedly in opposition to my idea of oats as feed for sheep, which idea I have gained by conversing with Vermont feeders and growers, combined with the experience which I have had the past winter, that oats are admirably adapted to sheep. The Vermont feeders of sheep, with whom I have conversed, do not hesitate to say that their experience with different kinds of feed proves that oats will lay on more pounds of fat in a given time than corn. Also that it is much safer feed. I have also heard it remarked that sheep fattened on oats hold out better weight in market than when fed on corn. We are well aware, fellow farmers, that all kinds of grain should be fed judiciously, and at regular times; the latter to which particular attention should be given, in order to meet with satisfactory results.

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[For the Country Gentleman and Cultivator.]

Cabbage Pests.

If "Cabbage Eater" will apply a liberal sprinkling of chloride of lime—say twenty-five cents worth, among five hundred cabbages, he will very likely rid himself and his favorite food of the "lice" abomination of which he complains. This is not, however, an infallible remedy, but a very general one. A certain preventive against lice, worms and "clump feet," is to saturate well with stale urine, during the winter, the bed to be sown with cabbage seed. This will insure strong, healthy plants, and a crop of cabbages free from disease or vermin. R. C. K.

Cabbage Eater will save his plants by putting a couple of tobacco stems around the stalk—not touching, but near it. My cabbages were nearly covered by lice last spring, and a few stems drove them off at once.

Berry Hill Farm, Westmoreland Co., Pa. A. W. FOSTER.

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☞ Lists of Premiums, Regulations, &c., for the forthcoming Watertown Fair of the New-York State Ag. Society, can now be had on application at this office.

Inquiries and Answers.

Bone Manure.—I can get a ton (2000 lbs) of bones, for from $5 to $10, and as many more for nothing. Will it pay to *buy* and gather these to use on my farm, which is peculiarly adapted to grass, and also produces all kinds of grain well? Can they (the bones) be dissolved to advantage in lye made from wood ashes or potash, and how much would dissolve 100 lbs? Would *acid* pay as well or better than lye, or would it be better to pack muck or stable manure (horse,)as described in Co. Gent. of a recent date. "Tyro." [Bone manure, like all special manures, is somewhat uncertain in its operation—that is, its results are sometimes very satisfactory, and at others not, according to various controlling circumstances. As a general rule, however, it may be regarded as a very valuable fertilizer, and would be cheap at $10 or even $20 per ton, if manufactured for use. All estimates of this sort, must be indefinite—there is no mathematical precision in calculating the operation of manures and growth of crops, and never can be. The use of acid requires considerable skill and experience—we should prefer the mode referred to, as described in the Co. Gent., and not recommend lye.]

Solidified Milk.—Through the medium of your paper I would ask for information in relation to the modes and manner of putting milk into a concentrated form, either in the shape of paste or powder, and the advantages, if any, for a dairy farmer to adopt the plan? Is the outlay heavy in making the commencement, and is it under the restriction of a patent? What part of the country has been successful in reducing milk into a powdered state? Any information on the subject will be thankfully received. E. P. B. *South Hadley, Mass.* [Milk is solidified by evaporation, but we cannot give the details of the process. The object is to make it suitable to carry on long journeys or sea voyages, by preventing fermentation and rendering it more portable. We are not aware that there is any market for it, or that there would be any profit in introducing its manufacture into common dairies.]

Manure—Strawberry Runners.—Will you be kind enough to state what is the value, as a fertilizer, of manure that has been used in a hot bed? Also the proper manner to remove runners from strawberry plants cultivated in hills? Should they be pulled, pinched, or cut off, or is it immaterial? A Subscriber. [Hot-bed manure, if it has not heated too much and become dry, is rich and excellent. The runners of strawberries are to be merely hoed off in cultivation, or treated precisely as weeds, unless they are intended to increase for planting. Some varieties, as the Early Scarlet, will produce abundantly, even when the runners cover the bed with plants. Others, as Hovey, Peabody, and Triomphe de Gand, must be kept well cultivated, or in "hills," or rows. But all strawberries are larger and finer if treated in this way.]

Wind Mills.—Will you or some of the correspondents of The Cultivator, inform me through its valuable pages what the power of a wind-mill would be, whose diameter is eight feet, and having eight vanes, from twelve to sixteen inches wide. Would it be too heavy if the wheel weighed one hundred pounds? Where is Elgar's self-regulating wind-mill made? R. [Our correspondent may easily make his own calculations, by first ascertaining the surface of all the vanes in square feet, and then allowing one-tenth of a pound on the square foot for a light breeze, two to three tenths for a gentle wind, one pound for a brisk wind, two to three pounds when very brisk, and four to six pounds for a high wind. The wind-mill mentioned would be much too large and heavy for anything but a self-regulator—unless constantly watched, it would be soon broken to pieces. We do not know where Elgar's is made.]

Cabbage Lice.—In this locality for two years past, what are called in common parlance, "Cabbage Lice," have been abundant, and their presence has been most destructive to that excellent vegetable which they infest. They appear early in the season, and thrive until the crop is put up for the winter. When they make such an attack upon the growing plant as to crimple the leaves, the plant never will overcome the injury; although it may form a head and seem to look good, an examination will prove that it is *loosely* formed and unfit for use. Last year their ravages were quite extensive I discover that they have already made their appearance this spring upon the "cabbage stumps" put out for salad. Now what will "cure or kill" these vermin? Is there a remedy, or must we stop growing cabbages? Give your readers a little light on this question. Cabbage Eater *Painesville, O.* [We hope some of our readers may be able to furnish the information desired by our correspondent.]

Seed Drill.—I write a few lines of inquiry concerning a grain drill for sowing wheat or other grain—whether one will operate in this section? I have never seen one in use. The land here is more or less supplied with stone, which might obstruct the operation of such a machine, damage it, &c. Andrew J. Chellis *Meriden, N. H.* [Bickford & Huffman's seed drill is perhaps the most approved and extensively used of any manufactured in this country—it is strongly made, and will operate on any land not too stony for the use of the common cultivator. The price is about $70 or $80, according to size, to which the cost of conveyance to New-Hampshire is to be added. We have known this drill for many years, and have witnessed its successful operation; and as a proof of its value may state that when first introduced the owners of machines offered to sow the crops of farmers for nothing but the fairly estimated increase of the crop.]

A Genuine French Zinc Paint.—*Eds. Co. Gent.*—I note the remarks to your "Zinc Paint Inquirer" in your valuable paper, and believing it is your desire to correctly inform your readers upon all subjects, I beg to make some suggestions:—The object of house painting is to preserve and ornament. The oil is the preserving quality, and the lead or zinc the ornamental. The Vieille Montagne Co.'s zinc, known as French white zinc, is superior to any paint known, in every respect. The reason is apparent, for lead will only absorb 40 per cent. of its weight in oil, while zinc absorbs 85 per cent.—here you obtain a better paint at the start; and in regard to coloring matter, it is so decidedly superior to lead as to need no remarks. Part of the basis of lead is sulphur, which only needs contact with the oxygen in the atmosphere to destroy it, and turn it yellow—hence the reason why a house painted with lead has to be renewed every two or three years; whereas with zinc, no gas known to chemists can change its color. Zinc applied to woodwork only half seasoned, will peel unless it receives a preparatory coat of gum shellac; it will also peel if painted in damp or wet weather. These are the only cases in which it will peel, if properly applied. The advantages of zinc over lead can be summed up in a few words, to wit:—French zinc is superior in every respect to lead or American zinc. It costs the same as pure lead, but absorbing more oil, it covers a fourth more surface, and is therefore 25 per cent. cheaper than lead. White French zinc will not turn yellow; and if properly applied will not peel, and will be as smooth as marble. For contractors it offers great economy, as it goes further; also to owners of property, on account of its durability. The only objection practical painters have to its use perfectly pure, is its durability. It lasts too long. Colors with zinc bases retain their brightness. I might enumerate other advantages of French zinc over lead, but enough for our feast is sufficient. Joseph M. Strong,

44 Greene-st., N. Y., Agent for the Vieille Montagne Co. of Paris.

Clover Seed.—How much clover seed does it require to seed an acre *well*, and does it succeed well with fall sowed wheat or rye, and should it be sowed at the same time as the grain and bushed in, or sowed on the snow in the winter or spring, as many sow grass seed? L. R. *Cedar Rapids, Iowa.* [Twelve pounds of seed are usually regarded as a good seeding—but fifteen or twenty pounds, by giving a close thick crop, would probably be more profitable. The young plants are liable to be thrown out by freezing, when sown in autumn, hence spring is preferable. It is commonly sown on winter grain quite early in spring, so that the crumbling process of freezing and thawing, combined with spring rains, may cover it. If the weather should prove unfavorable, it sometimes fails, and a light brushing would therefore be more certain in all cases.]

Free-Martins.—I have a pair of twin calves (a bull and heifer) of very choice Alderney stock, that I am desirous of raising—but having been told that twin calves will not breed I shall be obliged to you if you will inform me whether it is a fact or not? S. S. S. [The heifer, when twinned with a bull calf, is called a "free martin," and is most generally (but not invariably) barren; on dissection she may be found to possess some of the organs of each sex, but neither perfect. We never heard that there existed any difficulty with regard to the procreative powers of the bull.]

Lolling Horses.—I have stopped horses from "lolling" by using a common straight bit, and I think it will unless the horse does it from habit—by that I mean, the horses I have tried it on lolled, because their mouths were made sore during the process of bitting when broke to harness, or after. If a common straight bit does not answer, I should try one just long enough to fit the mouth, with large bar, and perhaps it would be well to put on leather check-guards. Draw the bit snug up in the mouth, and use the horse a few times with a loose check-strap; after a few times using, I think there will be an improvement in the looks of the horse, as I have had two which gave up lolling after the first trial.

JAMES THOMPSON.

How to Kill Cabbage Lice.—In response to a recent inquiry in the Co. Gent., we publish answers contributed by several correspondents under the "Kitchen Garden" head. Since that part of our paper was in type the following has been received: "Boil old potatoes, and apply the water in which they are boiled to the plants, and the lice will disappear. If very numerous before the *first* application, a second may be required. I use a piece of sponge as the most convenient mode of applying the remedy.

Sunderland, Mass. T.

Draining.—Are underdrains beneficial in heavy clay soils, and what depth should they be dug? D. D. *Hawksbury, C. W.* [Underdrains are especially beneficial in heavy clay soils—even those that seem to be water-tight are greatly improved, the increased dryness causing cracks and fissures, through which the water finds its way, and thus an impermeable soil is rendered in some degree porous. The depth should not be less than two and a half feet. If too near the surface, turbid water will enter, and by depositing sediment, check the channel in the course of years. The depth should be at least three feet in lighter soils.]

Peat, Swamp Muck, &c.—What is the difference in the composition of "Peat" and "Swamp Muck"—what their comparative value as a manure for a sandy loam soil—best manner of preparing it? If composted with ashes, what chemical change takes place? Comparative value of leached and unleached ashes for that purpose? If composted with other substances, please note chemical changes. I hope some one who has time and understands analytical chemistry will answer in full and yet concisely. Practical knowledge alone also very acceptable. Let him who replies, recollect he speaks to thousands, and is deserving of many thanks. G. W. H.

Lunar Influence.—What effect has the moon on vegetation? or how does she influence the growth of vegetables generally? An answer will be thankfully received. J. F. Everhart, M. D. *Johnson Co, Kansas.* [We have answered questions similar to this on former occasions, and would refer to these answers. We may now briefly observe, that careful, continued registered observations, both in this country and in Europe, prove that the moon has no influence on vegetable growth, and philosophical reasoning corroborates these results.]

Farm Record.—It always affords me great pleasure to have an opportunity of benefitting my fellow laborers in our noble employment. Agricola, on page 320, asks, "Who among your thousand readers can testify of the excellencies of the "Comprehensive Farm Record?" I can say, for one, that I could not do anything at all if I had none. I find it the most useful thing I have. Every farmer should keep a record. This one is *complete*—no one should be without it.

River View Cottage. J. H. HUNT.

Lolling Horses.—I have cured my horses of this bad habit, by attaching a heavy wire to a straight bit, in such a manner that it shall extend in a curve from one cheek piece to the other, and lie just within the circle of teeth. It should swing rather loosely, with *limited* motion in the mouth. Care being taken to file off smoothly the cut ends—also that the wire does not crowd upon any of the teeth. New Haven.

Propagating the Raspberry.—How is the Raspberry propagated from cuttings? How old should the wood be? Of how many eyes should the cuttings be? Where can the seeds of the Paradise or Doucin apple be got? Young Horticulturist. [The Raspberry is propagated by cuttings of the root, and not of the stem. They are made about an inch long, slightly covered with a suitable mixture of sand and mould, and bottom heat given in a propagating-house or hot-bed The seed of the Paradise or Doucin cannot be had in this country. They are usually raised from layers or stools.]

Vegetation of Seeds.—How will I manage Mountain ash berries to make them grow—also arbor vitæ seeds, and magnolia glauca? J. E. *Davenport, Iowa.* [Mountain ash seeds must be washed from the pulp in autumn or winter, mixed with fine moist sand, and exposed to the weather. Early in spring plant them half an inch deep in very fine rich mould, shade, and water. Arbor vitæ should be planted in spring one-fourth or one-third of an inch deep, a very fine mould, and watered sufficiently, and shaded all summer. Magnolia seeds may be planted about an inch deep when fresh.]

Draining.—S. G, *Vermillion Co., Ind.* "French's Farm Drainage" will give you all the information required. We send it by mail post paid, for $1, but just now would prefer an Eastern bill or P. O. stamps, to western money.

Lolling Horse.—I have a mare who is all that she should be, with this exception: whenever she is on the road she lolls her tongue like an overheated dog. I have tried every means I could think of to correct this trick, but without success. Can you suggest a remedy? Westchester. [Can any one furnish a remedy?]

[For the Country Gentleman and Cultivator.]

USEFULNESS OF BIRDS.

The birds are laborers. How much travel, how much of investigation is required of a bird to find even the little sticks with which is framed the outer wall of the nest? One stick at a time is to be found, selected, carried and so placed upon the limb of the tree or elsewhere, that a sudden blast of wind shall not disarrange them, and so of the inner lining of the nest. What a circuit of country has to be gone over? What a sharp lookout has to be kept to find and carry one hair at a time for the birds' nests of even one neighborhood? And so we might speak in the detail of the skill, industry and labor necessary to make into a nest this great amount of building material. Now, let any man dwell upon the amount of labor that God has appointed birds to do, and along with it His declaration that birds are not to sow, or to reap, or to gather into barns, and he will be convinced that the provision for their being fed is neither the grains of the earth nor the fruits of the field. When birds perform their greatest amount of labor, and hence require the greatest amount of food, neither earth, or shrub, or tree, has either grain, or berry, or fruit. Where then is the provision made for feeding this army of little laborers? Where? Why, in the worm that is gnawing at the root of vegetation; in the grub that is making of naught the labor of the planter; in the millions of insects that are destroying, in the bud and the flower, the promise of the fruit tree; in the *larvæ* or egg deposited in the bark of the tree. Now, see you not that he who destroys the birds of the air; that he who breaks in upon and breaks up their industrial or domestic arrangements; so far forth does what he can to prevent the husbandman from receiving the reward of his labor, lessens the product of the crop he plants, of the field he mows or harvests, and of the fruit tree that he rears?

What makes the meadow present so many dead spears of grass? It is because the birds are not permitted to destroy the worms that feed upon its roots. What makes the *borer* so destructive in the orchard? It is because the bird has not been permitted to destroy the insect and the *larvæ*. Think you the *curculio* would so extensively injure the plum tree, had the horticulturist remembered that among other things to be protected were the birds if he wanted fruit? Not a bit of it. There was a neighborhood in Europe where, by bounties, they succeeded in expelling birds. The result of that expulsion was, the destruction of their meadows, of their grain fields, of their gardens, and the loss of their fruit. They found that the presence of birds was necessary to successful husbandry and horticulture. B. N.

Bethlehem, May 28, 1861.

☞ The Oregon State Ag. Society has published a schedule of Premiums for its first Annual Fair, to commence on the first of October, 1861, and continue four days. The place of holding the Fair has not yet been determined. The premiums are very liberal, and amount to some two thousand dollars.

Rye and Indian Griddle Cakes. — To one cupful of corn meal, two cups of rye flour, one egg, a little salt, and three spoonfuls of soda and cream tartar, one of soda and two of tartar, make a batter the same as for buckwheat cakes, and bake on a griddle.

THE CULTIVATOR.

ALBANY N. Y., JULY, 1861.

☞ The Agricultural Society of Holland is to hold a general trial of Haying Machines and Implements, including Mowers, Hay-makers, Horse-rakes, Carts, &c., during the first half of June, on the Harlem "Polders," near the Vogelenzang station in North-Holland. — — — A meeting was held at Frankfort, April 15th, called by a large number of leading agriculturists, to organize an "Agricultural Union" for the South-west of Germany, including the territory in which that city is situated, the two Hesses, the Duchies of Nassau and Baden, Bavaria and adjoining Prussia. It was modeled after similar organizations already existing in eastern Prussia, Saxony, and north-western Germany. — — — There is, beside the foregoing, a "Society of German Agriculture," embracing the whole country, which held its first session Ap. 5, at Erfurt in Prussian Saxony. This meeting does not appear to have been very largely attended, only about 70 members having been present, including, however, a number of eminent men. An exhibition was determined upon for the coming summer, to take place probably at Frankfort-on-the-Maine, and there was a lively discussion as to whether competition should or should not be open to English Implement-Makers. — — — Agricultural instruction in Prussia is still farther extended by the establishment, announced in the *Gazette de Cologne* of March 19, of another Agricultural School, at Annaberg in Rhenish Prussia —in a district very fertile, and a locality very conveniently situated. The inauguration of this School had already taken place; it is intended exclusively for the instruction of the sons of rural proprietors, the number of pupils is limited, and the course is to be of an exceedingly practical kind—the students performing farm-work of every sort, and "gaining their bread by effective labor as if they were at work in ordinary farm service." — — — The Agricultural Journals of Germany can almost be counted by the hundred; it therefore results, remarks Mons. BARRAL, "that most of them have very few readers and very little influence." A large number of them were therefore discontinued at the beginning of 1861, and combined with an old established journal, hereafter to be published weekly instead of monthly, under the title of the "Agricultural Annals of the Kingdom."

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☞ As the Season advances the probability of a continued demand abroad for all our surplus Breadstuffs increases rather than diminishes. The Mark Lane Express of May 13, reports harsh, drying winds and frosty nights during the previous week, checking vegetation quite seriously:—"Even the Wheat which has borne the weather best still looks the worst among cereals; although there is a serious failure as regards Beans in some localities, partly traceable to the badness of the new seed. As the season advances, there is therefore less of promise in its aspect, and though a sudden change to warmth with light rains might do much to make up for arrears in point of time, *a good or even average yield of Wheat would be next to a miracle.* Still there are some early planted pieces that look as well as could be desired. Forward Potatoes have been nipped by the frost. The grass has been seriously checked, and made scarcely any growth for a fortnight, and the price of store cattle has been reduced as a consequence, while the demand for Cake and dry food has been enormous. *Nor has this untoward weather been peculiar to our own shores.* France and the more northerly countries have felt its chilling effects, and more firmness in prices has resulted generally. Our own Wheat trade, though very stagnant at the opening of the week, eventually evinced more tone; but in the South of Europe, beginning with Odessa and proceeding through the Mediterranean, business has languished so far as the north of Spain, where the crops as well as in Algeria are making fair way."

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☞ The Mark Lane Express announces that his Royal Highness Prince ALBERT has consented to act as President of the Royal Agricultural Society for next year, when the Great Show will be held in Regent's Park, London, in connection with, or during the Exhibition of the Industry of All Nations.

This is a matter, of less interest of course, in this country than in England. But it still seems worth particular mention, because, as the Journal just quoted aptly remarks, it is "no empty compliment" on either side. The high position of the Prince, not less than that of the Society, have only rendered it matter of surprise to a foreign observer, that the first honor in its gift should not sooner have been offered for the acceptance of one who has so uniformly done so much to add to its exhibitions, and whose rank *as a Farmer* is probably second to that of no other proprietor in the Kingdom.

It chanced that early in July, 1859, it was the good fortune of the present writer to visit the Farms carried on by Prince ALBERT at Windsor, with a party consisting of three or four members of the Council of the Society in question, by whom, after the sight-seeing of the day was over, the eminent fitness of his Royal Highness for the Presidency, was alluded to in conversation, and an informal nomination unanimously carried. It is this visit, doubtless, to which allusion is made in the following extract from the *Mark-Lane Express* article—to which we may add, as matter of interest to Americans, that the "new grass-cutter" referred to as then on trial, was a Wood's Mower, manufactured in this country. Our contemporary says:—

"The world already knows of his Royal Highness' success as an exhibitor of stock; but it is not every one who has had the delightful privilege of inspecting the Park Homesteads at Windsor, or of seeing and hearing how thorough an interest both her Majesty and her Consort take in the different phases of the Home, the Norfolk, and the Flemish Farms. With an enlightened and enlarged mind well fitted to his position, the Prince gives everything in any way worthy of his attention a fair trial. We see this alike in the breeds of stock he cultivates and the different descriptions of machinery he employs. There are those first favorites, the little Devons at one farm, the Herefords at another, and the Short-Horns at a third; with, moreover, an especial place for the dairy. The day on which we had the pleasure of going round, there was a new grass cutter on trial; while one of Smith's steam cultivators has been at work at Osborne, and another of Fowler's at Windsor. Both the Queen and the Prince make it their care to see such inventions well tested, and the Royal pair are equally zealous in marking the improvement of the animals. The Prince is known to be a capital judge, and there is not a beast but that he has the history and value of at his command. With, then, his great abilities and natural predilections, we may repeat that his Royal Highnesses' acceptance of the President's chair should inaugurate a great year for agriculture. It will be the especial duty of the Society to make this worthy of him. There is an *eclat* already attached to the Meeting, that needs but careful cultivation to grow and thrive as time progresses."

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☞ The following extract from a private letter under date of June 5th, expresses, we presume, the common sentiment in Agricultural circles upon the subject to which it refers:—

"I spent a few days at Washington last week; and in common with every true friend of agricultural improvement who has heard of it, was much mortified to find that the Commissioner of Patents had sent to Europe to purchase seeds, and obtain information about wine, grapes, wheat, &c., that notorious individual, who was shown, when connected with the Patent Office before, under President Buchanan, to be such a humbug that the weight of public opinion forced his removal. You are no doubt acquainted with his antecedents, and among others his plagiarism of whole pages entire from English works. I do not wish my name used in this connection, but having found out at Washington that this same man has really been sent abroad, *to the discredit of the administration and the country*, I think the agricultural press should speak out in condemnation.

"An editorial on the subject in the COUNTRY GENTLEMAN, would no doubt call attention to it, and perhaps induce his recall."

We regard the system of seed distribution by the U. S. Government—at least as, hitherto, it has always been conducted—as little better than a fraud upon the public Treasury, and upon the Agricultural community at large. We had but lately learned of the appointment alluded to by our correspondent, an appointment which accords so well with the previous history of this whole business, that it almost seemed, either a work of supererogation on the one hand, or an absolutely hopeless task on the other, to discuss the subject as it deserves.

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☞ A contemporary (the Hartford Homestead) appropriately suggests that this is a year when we "cannot afford" to expose any crop to risks which it is possible to avoid. It therefore reminds the farmer that HAY CAPS may save what constitutes one of his most important sources of dependance, the supply of the winter's food for his live stock. To which we may add that if the season, as it advances, continues to include as much showery or "catchy" weather as it has done already in some localities, the importance of having Hay Caps will be duly appreciated before hay-making is over. We quote the following directions for making them :—

"Fair quality sheeting, four feet square, with cords and pins in the corners, washed with salt whitewash, is all that is necessary. It is not worth while to hem the edges, though perhaps caps thus made are better—stronger and less likely to tear. A careless hand sometimes will jerk them about so as to tear them, but if two edges are protected by a selvedge, it is commonly enough."

Farmers sometimes overlook the difference which exists in the quantity of grain they can dispose of, in a season when the pasturage is good all along, the hay all well got in, and the cornstalks nicely cured,—and a year when feed is scarce and poor. The vast stock of grain we have to sell abroad at the present time, is owing to the fact, not only that the grain crops here were generally heavy, but also that the supply of feed was almost universally very large; and the quantity of wheat and corn we shall be prepared to export after the next harvest, will be materially affected by the quantity and quality of the fodder we are able to cure during the coming summer and autumn.

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☞ DICKENS has naturalized in the English language a phrase expressive exactly of the energy of many members of Agricultural Societies, as well as of government officials—How Not to Do it. But the Council of the Royal Agricultural Society, anxious to have members chosen who will attend its meetings, have devised a way *how to do it*, singularly simple and efficient. A table was published in the Agricultural journals, several weeks in advance, giving the names of the 25 members whose term of office was to expire May 26, together with a statement of *the number of meetings at which each has been present*, during the past two years—thus showing at a glance who will be likely enough to attend to duty hereafter, to be worthy of re-election, and who may be advantageously permitted to retire to private life. Nevertheless, in accordance with the usual conservatism existing in such bodies in England, the whole number will be re-chosen, excepting the two or three who decline for personal reasons; and the only effect accomplished, is, perhaps, that of prompting delinquents to better behavior hereafter. Of all the list of 25, we observe that none have had so frequent calls upon their time as Col. the Hon. A. N. HOOD, who also occupies, among other responsible trusts, the post of Superintendent of the extensive farms of his Royal Highness, Prince Albert; and none have responded to these calls with anything like so great regularity of attendance—being 55 out of 59 committee meetings, and 13 out of 15 monthly councils.

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WHEAT CROP.—During a recent journey through portions of Southern Pennsylvania, the wheat crop generally presented a promising appearance. The growth was uniform, and did not exhibit the numerous bare patches observed in some of the best wheat districts of New-York, where, on heavy or strong soils which have not been underdrained, much has been winter-killed. The only drawback of the Pennsylvania crops was the unusually short heads, but there will probably be a good average crop. Corn was small, many fields having been replanted, but if the weather in future prove favorable, there will be nothing to fear. We are inclined to the opinion that if farmers of that, and of regions of a similar latitude, should plant varieties somewhat smaller and earlier, and correspondingly thicker, they would reap a decided advantage in several respects, although the growth might not make so much show. J. J. T.

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WATER RAMS.—We recently had the pleasure of spending a few hours at the fine rural residence of SAMUEL RHOADS, Esq., in the western suburbs of Philadelphia, where among other matters of interest, the successful use of the water-ram for a long period, is worthy of notice, especially as there has been some controversy lately among our correspondents, as to its permanent value. The one we here allude to has required no repairs during the twenty years it has been in use, except an occasional renewal of the valve. It raises water forty-five to fifty feet elevation, to an amount of many hogsheads a day, the supply being furnished by a spring, filling an inch driving pipe. At first some difficulty resulted from this pipe not being strong enough for the pressure, but this was easily and permanently remedied. Force pumps, worked by hand, were employed before the erection of the ram, but the latter has been found a great improvement on the score of convenience.

◆

NEW-YORK STATE FAIR NOT POSTPONED.—A notice in the Knickerbocker this morning, that the New-York State Ag. Society will not hold a State Fair as usual, is the first intimation I have had on the subject.

The Executive Committee intend to hold the Fair as usual, and all the usual arrangements are being made—and the prospects are favorable at present for a good exhibition. The mistake came from the postponement of the Trial of Implements. B. P. JOHNSON, Sec'y.

Ag. Rooms, June 3d, 1861.

◆

BOILING VS. GRINDING INDIAN CORN, BUCKWHEAT, &C.—In reply to an inquiry about grinding Indian corn for cattle-feeding, a correspondent of the North British Agriculturist states that during last winter he had used it boiled, after having been steeped forty-eight hours, and that he found it answered well, both with hogs and fattening cattle. In partial confirmation of the advantage of boiling *some* grains, we may state that peculiar circumstances having led us to employ buckwheat one winter, in preference to other grain, we adopted boiling as the preferable mode of preparing it for feeding; and that, judging principally by the quantity and quality of the milk given by the cows, and by the condition maintained by them notwithstanding an unusual flow of milk, we were persuaded that an equal value of no other grain, at average prices, would have been at all likely to have yielded an equally profitable result. A.

◆

MEASURING A HAY MOW.—I have just measured and weighed a mow of hay. It was two-thirds clover, and one-third timothy, coarse and rather ripe when cut. It then got wet in the cock, was spread, and got very dry, then pitched into the mow with a horse fork; I think it does not pack quite as close for that, and after the mow was settled it was 10 feet deep, (no pressure on the top.) Size of mow, 12 by 26 feet, and 10 feet deep—equals 3,120 cubic feet, which, divided by 5.68, (number of tons,) is equal to 549 cubic feet for a ton. W. P. *Oswego, N. Y.*

☞ *Westchester, Penn., June* 13.—After a day spent in making quite an extended circuit to the north and west of this place, I can report the prospect of the crops, so far as I have seen and heard, in this part of the State as generally good. We have passed many excellent wheatfields, of which I shall have more to say hereafter; this grain, although it has sometimes been thicker on the ground, is well along for this time of month, and the heads are of good size—a full yield is anticipated. Corn is backward; the best fields we have seen in *evenness* were not more than from three to four inches high, but we noticed one on the Brandywine Flats where now and then a few hills were somewhat more advanced. Oats are looking pretty well, and I believe not much behind. Some clover fields were much injured from freezing out last winter, but grass is generally good, and on one farm we passed hay cutting had already begun, although apparently in a not very extensive way.

Strawberries are in their prime here; there will be some apples, but other fruit is mostly destroyed by the winter. Green peas are ready for the table, and in ordinary seasons some new potatoes might have been ready to dig. Those that were planted early this year were cut down by a frost in April, when the thermometer fell to 28 deg.

The day has been a beautiful one for an excursion into a beautiful country—not so oppressively warm as two or three that had preceded it, but still bright enough, and the sunshine sufficiently powerful to bring the corn well on. My notes will bear keeping another week, and after a few days more among the excellent farms and farmers, for which Chester county is so widely noted, I shall be able to speak more understandingly of its Agriculture than I could at present. The Agricultural Society's Fair Grounds at this place are now occupied as a Military Encampment, and I am writing within sight and sound of so much to remind me that the "genius of war" is abroad in the land. L. H. T.

◆

☞ The Annual Show of the Ayrshire (Scotland) Agricultural Association was held at Ayr, April 30, and, as last year, the MILKING COMPETITION was regarded as one of its most important features. This was conducted as follows:—The six competing cows were taken to the Star Hotel coach-house, at Ayr, on Thursday evening, to be milked under the superintendence of the judges, preparatory to the competition on the mornings and evenings of Friday and Saturday—no restriction whatever being placed upon exhibitors in regard to the keeping of their cows. The following is a statement of the quantities of milk yielded, and the weights of butter churned from the milk:—

Cow belonging to	Greatest Milking		Average of Four Milkings.		Weight of Butter.	
	lbs.	oz.	lbs.	oz.	lbs.	oz.
A. Wilson,	27	12	24	3½	2	2
J. Hendrie,	26	0	24	5	2	14½
W. Reid,	25	7	20	8¾	2	9
W. Reid,	30	15	27	5½	3	6½
R. Wallace,	28	14	28	8½	1	9½
R. Wallace,	25	5	23	8¼	1	15

The judges gave the first prize for "the greatest weight of milk at four successive milkings" to Mr. Wallace, and the second to Mr. Reid; the first prize for "the greatest value of butter from the said milkings" to Mr. Reid, and the second to Mr. Hendrie. It will be thus gathered that the greatest weight of milk, even in cows of the same breed, did not make the most butter; but that an inferior milker more than "doubled" the heaviest of the pail when they came to the churn. In estimating the qualities obtained, the Ayr Advertiser, in a very complete report of the meeting says: "The average milking of the prize cow last year was 26 pounds 5 ounces. The increase of this year is probably owing to the cows having grass. The quantities are very large; but greater milkings were yielded by the same cows for several days before the competition. The change of place and the disturbance are injurious to the animals. Mr. Reid's cows in particular seemed to suffer from restlessness. Mr. Wallace's prize cow was very steady, her greatest variations at the four milkings being from 28 pounds 14 ounces, to 28 pounds 3 ounces."

The curious fact that the cow which gave the most milk and cream, should have given *the least butter*, was entirely unanticipated from anything shown by a chemical analysis of the milk, made by Prof. Anderson, and is only to be explained, perhaps, on the ground that in this case "a great part of the butter must have run away with the buttermilk." The paper above quoted gives the following details, which also throw some light upon the difficulties of the case:—"The milk was all 'lappered,' as it is termed in the neighborhood of Glasgow, instead of the cream being separated from the skim milk and churned by itself. The morning milk each day was cooled and mixed with the evening milk in the lappering dish. A little buttermilk was added, to hasten the acidulation. It remained in the dish till Monday, the time appointed for churning. People who follow this method of butter-making are aware that when the lappering is insufficient, less butter is obtained. At the competition the same time was allowed for all; but it is probable that the milk of some cows may require a longer time than the milk of others."

◆

A COMPLETE PRONOUNCING GAZETTEER, or Geographical Dictionary of the World. Containing a Notice and Pronunciation of the Names of nearly One Hundred Thousand Places. With the most recent and authentic information respecting the Countries, Islands, Rivers, Mountains, Cities, Towns, &c., in every Portion of the Globe. Including the latest and most reliable Statistics of Population, Oommerce, etc. Edited by J. THOMAS, M. D., and T. BALDWIN, assisted by several other gentlemen. Philadelphia: J. B. Lippincott & Co. 1861.

This work has now been some little time before the public—uniformly receiving, so far as we are aware, the highest commendation for its fullness, accuracy, uniformity, and many valuable features not to be found, at least in so great a degree, if at all, we believe, in any other English Gazetteer. Containing nearly 2,200 pages in fine but clear and legible type, it is a monument of the industry and acquirements of its accomplished editors. Much of the vast store of information it contains, indeed, was derived or verified from their personal observation in various parts of the world; Dr. THOMAS, for example, having visited India and the Himalayas for the purpose of obtaining greater geographical and etymological accuracy than was to be had by the consultation of any existing authorities, and the notes of his tour, which just preceded the great Indian rebellion, will still be remembered by our readers, as published at that time in the columns of the COUNTRY GENTLEMAN.

◆

☞ Of all nations on earth, there is perhaps none so fond of occasionally "seeing the elephant," as ours—of all the children of men, perhaps none who pay the price so cheerfully—are humbugged, or not, as the case may be, so good naturedly—and forget so soon the fever into which they were hurried by the "sight," in some new epidemic of still later introduction. Thus we received and feasted the distinguished Embassadors from Japan, and paid the bills, and made them presents which will enable them to fight us sharply if there should ever come about a suspension of amity between the two nations; and having thus worked ourselves into quite a frenzy of hospitality over the mum Orientals, sent them home to report as they might on the condition of civilization existing among us western barbarians. We noted, at the time, that Mr. D. M. DEWEY of Rochester, had sent to them as they were on the point of departure, samples of his colored Prints of Fruits and Flowers, and we are reminded of this fact, and, indeed, of the very existence of the "Japs," as they were popularly termed, by the receipt of a note from Mr. D., stating that an acknowledgment of his gift has just arrived, duly couched in the politest of Japanese, and drawn up in the most enigmatical of characters—accompanied, however, by a translation bearing the sign-manual of the inevitable "TOMMY," doing the thanks of the Embassy for Mr. D.'s attention, into respectable English.

◆

☞ The Gardeners' Chronicle contains an interesting account of "a magnificent flagstaff of the DOUGLASS PINE" just erected in the Arboretum at Kew. It was a present from British Columbia, and was cut from a tree supposed to be "not much less than 200 years" old, the total height of which was 220 feet. The length of the staff itself as finally erected is 159 feet; diameter at butt, 19 inches, at top 7 inches; total weight of the stick, 4 tons, 8 cwt. 28 pounds. "It contained about 150 annual layers, which were close and well defined by broad brown resinous rings." The raising of such a stick to a perpendicular position, and securing of it there, was a good deal of an undertaking, but was finally accomplished without accident—" now wavering about in the wind during pauses in hoisting, then trembling like a willow wand as its tapering top slowly approached the zenith, until it finally came to its rest as straight as an arrow, and so perfectly erect that a plumb line dropped from the truck cut the centre of the butt." A previous attempt to erect a staff presented by the same gentleman, only 118 feet in length, had failed, the stick breaking loose while suspended in mid-air in the process of raising, and falling to the ground, breaking from its own weight into six separate pieces. This gentleman, Mr. Stamp, is an importer of timber and spars for naval purposes, for which the forests of British Columbia afford immense resources.

◆

☞ We have received several numbers of "The Scottish Farmer and Horticulturist," a new weekly journal, published at Edinburgh. Its page is about as nearly as possible the exact size of our own, and in the several departments into which it is divided, we trace a marked resemblance to the system adopted in the arrangement of the Co. Gent. Its subscription price, like those of other British weeklies, is about $5 per year, and the proprietors can accordingly afford to give 32 pages in each number, instead of 16 as we do. If the numbers already received are a fair sample of what it is to be hereafter, it will prove an important addition to the ranks of the Agricultural press. No paper that comes to us from abroad treats a greater variety of rural topics; while many of the articles are quite elaborate, as well as of an immediately practical character, which latter as a general thing does not mark the contents of our foreign exchanges in so great a degree as to render them of very much real value to a farmer in this country.

◆

Injurious Effects of Large Applications of Salt to the Soil.—In the course of a discussion at a meeting of the Highland and Ag. Society of Scotland, some were of the opinion that salt, at the rate of two to three hundred weight to the acre, was efficacious as a remedy for the turnip-fly; while others were as decidedly of opinion that it did not prevent the attacks of this pest.

With regard to salt in the large doses recommended by some—6 cwt. per acre—one member said he had tried it on a crop of mangolds, which it completely killed, so completely that he plowed it down and sowed it to turnips, and it killed the turnips also. Another stated that a similar dose had killed his cabbage.

◆

Grapes Winter Killed.—The injury or destruction of hardy grapevines by the past winter, has been extensive in the Northern States. A letter from C. W. Seelye of Rochester, N. Y., in the last number of the Horticulturist, states that nearly all his Isabellas are killed to within two feet of the ground. The Diana has suffered to nearly the same extent; and the Hartford Prolific and Rebecca as much as the Diana. The Delaware, on the same trellis, has not suffered in the least. "The wood," he states, "is perfect to the very tip, and every bud opening." This extreme hardiness of the Delaware, has been proved on other occasions, and is a curious fact for those to digest who insist that it is an exotic or of exotic parentage.

◆

Geological Survey of Maine.—We are pleased to see that Dr. Holmes, so long time the editor of the *Maine Farmer*, has been associated with Prof. Hitchcock of Amherst College, in the Agricultural and Geological Survey of Maine.

◆

Clover Seed Sown in the Fall.—Hon. J. Edgeomb of Indiana, states in a letter to the Journal of the New-York Ag. Society, that for two years past he has sowed clover seed in Septemper, at the time he sowed wheat, sowing plaster on the wheat the following spring to aid the growth of clover, and it has succeeded well. In regard to the effect of plaster, he adds, "I sowed plaster on my clover pasture last spring, leaving several strips of land across the field unsowed, and am sanguine there was double the amount of clover obtained by its use."

◆

AGRICULTURAL SOCIETIES.

☞ We note that the Trustees of the "Massachusetts School of Agriculture," originally incorporated in 1856, lately met at Boston and effected a re-organization, to which was transferred the amount of subscriptions obtained under the former organization—about $10,000, it is stated—with the apparent understanding that Springfield should be the locality chosen for the establishment of the institution. The following gentlemen constitute the new Board:

President—Marshall P. Wilder, Boston.
Treasurer—H. Alexander, Jr., Springfield.
Corresponding Secretary—Prof. W. S. Clark, Amherst.
Recording Secretary—E. W. Bond, Springfield.
Trustees—George W. Lyman, Richard S. Fay, C. C. Whittemore and Samuel Hooper, Boston; Chester W. Chapin, Horatio N. Case, John L. King and James Thompson, Springfield; Aaron Bagg, West Springfield; H. H. Peters, Southboro; and Asa French, Braintree.

☞ At a meeting of the Stockholders of the Owen County, Ky., Union Agricultural Society, held at New Liberty, April 3d, 1861, the following gentlemen were elected officers for the ensuing year:

President—Col. W. G. Simpson.
Vice President—Thos. H. Ritchey.
Treasurer—S. B. Brown.
Secretary—J. P. Orr, Jr.
Directors—S. P. Tucker of Grant; Wm. Payne and H. C. Castleman of Gallatin; Robt. Ellis and John S. Gullun of Carrol; W. W. Wright of Henry; James Gayle, R. H. Gale, R. S. Beck, W. H. Garnett, and J. W West of Owen.

☞ At a meeting, May 8, of the Agricultural Association of Oxford and other towns, Chenango Co., N. Y., it was resolved to hold the next Fair of this Association at Oxford, the 23d, 24th and 25th days of September next. The Chenango Co. Agricultural Society have fixed upon Norwich as the place, and the 10th, 11th and 12th days of September as the time for holding their next Fair.

☞ The next Fair of the Delaware Co. Ag. Society is to be held at the village of Hobart, the 18th, 19th and 20th days of September.

☞ The State Agricultural Society of Oregon has fixed upon Oregon City as the point at which to hold their first Annual Fair, in October next.

If you want a Tile Machine that with 2 men and 2 horses you can make 1000 Tile per hour, address F. M. Matticc, Buffalo, N. Y., or J. W. Penfield, Willoughby, O.
Also the best Ditching Plow extant. June 20—w&m1t.*

BERKSHIRE PIGS FOR SALE.—Of fine quality, and true Berk marks, and suitable for breeding. For sale by EDWARD WAIT, Walden, Orange Co., N. Y.
June 20—w&m1t.

FIRST PREMIUM
AWARDED BY THE
N. Y. STATE AGRICULTURAL SOCIETY,
At Elmira, October, 1860,
TO HARDER'S HORSE POWER.

THE subscribers Manufacture, at Cobleskill, N. Y.,
ENDLESS CHAIN HORSE POWERS,
COMBINED THRESHERS AND CLEANERS,
THRESHERS AND SEPARATORS.

These Powers operate with greater ease to the team than others, running with very low elevation, and slow travel of the horses. The Combined Thresher and Cleaner runs very easy, is capacious, separates the grain cleanly from the straw, and cleans as well as a regular fanning mill. In short, THESE MACHINES HAVE NO EQUAL, of which fact we are confident we can satisfy all who will consult their own interest by addressing R. & M. HARDER,
July 1—m3t. Cobleskill, Schoharie Co., N. Y.

A Book for Every Farm-House.
COUNTRY LIFE—A Handbook of Agriculture, Horticulture, and Landscape Gardening. By R. M. Copeland. Beautifully Illustrated. Price, common edition, $2—Fine, $3. For sale by L. TUCKER & SON, Co. Gent. office, Albany.

Agricultural Books for Sale at this Office.

RARE CHANCE.

The undersigned now offers for sale his

SPLENDID SUBURBAN RESIDENCE & FRUIT FARM,

LOCATED NEAR

Hudson, Columbia Co., N. Y.

This farm, containing 20 acres, together with the buildings, is situated on an eminence commanding a very extensive view of the city, river and surrounding country. Within three-quarters of a mile of all the landings, railroad depots, and business parts of the city,—the grounds are all tastefully laid out and decorated with a great variety of flowering plants, trees, shrubs, vines, and varieties of evergreens, deciduous trees, screens, hedges, &c., &c. The farm is in a high state of cultivation by thorough draining, trenching and manuring. The buildings are all new, handsome, thoroughly built, convenient and ample. The garden and orchard is extensive, containing all the best varieties of apples, pears, cherries, plums, peaches, grapes, and quinces. Also Raspberries, blackberries, strawberries, currants, gooseberries, &c. Nearly 1,000 dwarf pear trees set in soil trenched two feet in depth, and trained pyramidically, are now bearing. The location is eminently adapted to the cultivation of the grape, as a large collection of the best varieties, producing splendid fruit, will testify. The farm is well adapted (as was designed) for raising fruit for the New-York market, and the fine specimens sent to market and on exhibition prove the truth of the assertion. Improvements too numerous to mention in an advertisement, together with the locality, render it one of the cheapest and most desirable places to be found on the Hudson between New-York and Albany. Price $10,000. Terms of payment made easy.

REFERENCES.—John Stanton Gould, Josiah W. Fairfield, Charles P. Waldron, Charles F. King, Captain Steamer Oregon, Hudson, or of the subscriber on the premises. SOLOMON V. GIFFORD.

June 6—w13tm3t.

STEEL PLOWS.

We are now manufacturing a superior **Steel Plow**, intended for general use. Some of the advantages it possesses over the cast iron plow, are lightness of draught, durability, and freedom from clogging or sticking in heavy, clayey sticky or tenacious soils. The parts most exposed to wear are so constructed that they may be readily repaired by any blacksmith.

We would refer to the following persons who have them in use:

John Johnston, Geneva, N. Y.; Wm. Summer, Pomaria, S. C.; R. C. Ellis, Lyons, N. Y.; Col. A. J. Summer, Long Swamp, Florida; A. J. Bowman, Utica, N. Y.; A. Bradley, Mankato, Minnesota; A. L. Fish, Litchfield, N. Y.; Volney Owen, Union, Ill.; John Slighter, French Creek, N. Y.

"Mohawk Valley Clipper," No. 1, full trimmed, all steel,..	$15.00
do. do. with cast point,.................	14.00
"Empire," No. 1, with cast point, full trimmed,.............	15.00
For Three-Horse Plows,.....................	$1.50 extra.
For Adjustable Beams, ...	1.00 do.

We also manufacture Sayre & Klink's Patent Tubular Shank

STEEL CULTIVATOR TEETH.

These Teeth are intended to supersede the old style of wedge teeth and teeth with cast iron heads. They are not liable to become LOOSE in the frame, like the FORMER, nor to BREAK, like the LATTER. They are as readily attached to the frame as any form of tooth.

SAYRES' PATENT HORSE HOE.

This implement is considered to be superior to any other for cultivating Corn, Cotton, Tobacco, Potatoes, Hops, Broom Corn, Nurseries, and all crops planted in rows or drills.

Steel Shovel Blades and Cultivator Points made, and all kinds of Swaging and Plow work done to order.

☞ SEND FOR A CIRCULAR. ☜

REMINGTONS, MARKHAM & CO.,
Ilion, Herkimer Co., N. Y.

E. REMINGTON & SONS,
BENJAMIN P. MARKHAM,
GEO. TUCKERMAN.

March 21—w&mtf.

LANDSCAPE GARDENING AND RURAL ARCHITECTURE

—Landscape, Agricultural and Civil Engineering, Surveying, Leveling and Draughting.

GEO. E. WOODWARD,

Architect, Civil Engineer & Draughtsman,

No. 29 BROADWAY, NEW-YORK.

Country Seats, Parks, Rural Cemeteries, and public and private roads, laid out and superintended. Plans, Elevations and Working Drawings for Buildings in all departments of Rural Architecture, prepared and mailed to any section of the country. Consultations gratuitous, personally or by letter, March 21—w&mtf.

JERSEY BULL, DEVON BULL AND CHESTER COUNTY PIGS.

For sale, a full blood JERSEY BULL of Henshaw's herd, a very superior animal. The thorough-bred bull "THANE OF DEVON," (Hurlburt's stock,) out of Lady Smith, (1364,) by Taurus. Also several litters of CHESTER PIGS, of Thos. Wood's choice stock, at reduced prices. Address D. CUTTS NYE, Lexington, Mass.

May 30—w2tm1t.*

IMPROVED SHORT-HORNS.—

The subscriber offers for sale, at moderate prices,

BULLS, COWS AND CALVES,

of excellent quality and good pedigrees. They can be seen at Ellerslie Farm, one mile south of Rhinebeck Station, Hudson River Railroad. May 23—w&mtf. WILLIAM KELLY, Rhinebeck, N. Y.

BEMENT'S AMERICAN POULTERER'S COMPANION, price $1.25—Browne's American Poultry-Yard, price $1—Miner's Domestic Poultry-Book, price 75 cents. For sale at the office of this paper.

THOS. WOOD continues to ship to any part of the Union, his celebrated PREMIUM CHESTER CO. WHITE HOGS, in pairs not akin, at reasonable terms. Address,

Jan. 10—w&mly. PENNINGTONVILLE, Chester Co., Pa.

SHORT-HORNS.

I offer for sale two Duke of Oxford BULL CALVES, one of them got by the "Duke of Gloster," (11382,) the other by imported "Grand Duke of Oxford," (16184.)

Also several well bred Bull and Heifer Calves by the same sire.

I have also a few

JERSEY OR ALDERNEY

Cows and Heifers for sale. JAMES O. SHELDON,

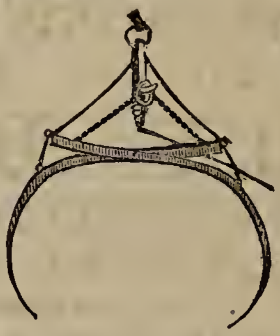
Jan. 24—w&mtf. White Spring Farm, Geneva, N. Y.

COE'S SUPERPHOSPHATE OF LIME.—

The subscriber has the above article genuine, and is prepared to furnish it in bags of 125 pounds, or by the ton from one to ten. Terms made known on application.

☞ Circulars sent gratis. WM. THORBURN, Seedsman,

April 25—w&mtf. 490 & 492 Broadway, Albany.



BEARDSLEY'S HAY ELEVATOR

OR

Horse Power Fork,

Can be used by one or two horses.

Price, including three pulleys and 60 feet of rope, $12.

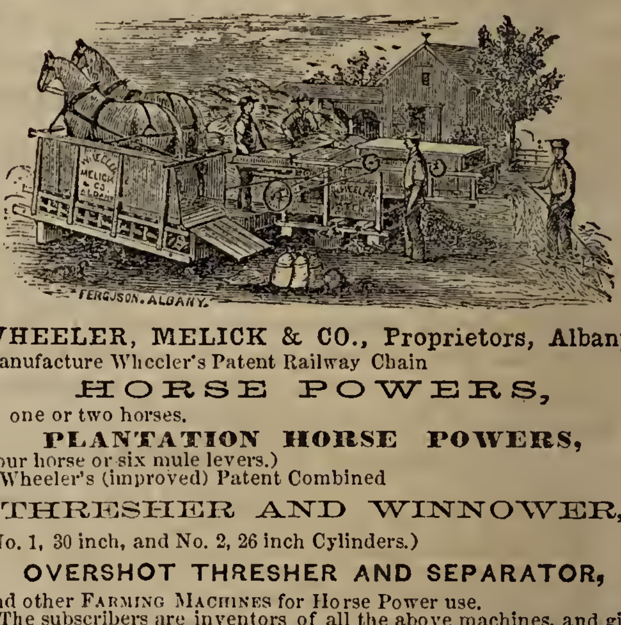
Liberal discount to dealers.

Rights for sale.

Send for a Circular.

LEVI A. BEARDSLEY,
South Edmeston,
April 1—m3t. Otsego Co., N. Y.

NEW-YORK STATE AGRICULTURAL WORKS.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Manufacture Wheeler's Patent Railway Chain

HORSE POWERS,

one or two horses.

PLANTATION HORSE POWERS,

(four horse or six mule levers.)

Wheeler's (improved) Patent Combined

THRESHER AND WINNOWER,

(No. 1, 30 inch, and No. 2, 26 inch Cylinders.)

OVERSHOT THRESHER AND SEPARATOR,

and other FARMING MACHINES for Horse Power use.

The subscribers are inventors of all the above machines, and give their entire attention to the manufacture of them, and having had the longest and largest experience of any firm in this business, feel warranted in saying that THEIR MACHINES ARE UNEQUALLED. They call especial attention to their

IMPROVED THRESHER AND WINNOWER,

of which over 400 were sold in 1860, satisfying all purchasers of their superiority and economy for threshing, separating and winnowing at one operation.

CIRCULARS containing list of PRICES and full DESCRIPTIONS and CUTS of each MACHINE, with statements of their capacity for work, will, on application, be sent by mail, postage free.

☞ Liberal discounts are made to Dealers. Responsible Agents wanted in sections where we have none. Address

WHEELER, MELICK & CO., Albany, N. Y.

April 4—weow6tm3t.

One Vol. 12 mo.—Price $1.50.

AMERICAN WEEDS AND USEFUL PLANTS

—Being a 2d and Illustrated edition of Agricultural Botany: an enumeration and description of useful plants and weeds, which merit the notice or require the attention of American agriculturists. By Wm. Darlington, M. D. Every Farmer or Farmer's Son who wishes to know the names and character of the plants growing on his farm, should study this book. For sale at the office of the Co. Gent. and Cultivator. L. TUCKER & SON.

A Book for Every Farm-House.

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By R. M. Copeland. Beautifully Illustrated. Price, common edition, $2—Fine, $3. For sale by L. TUCKER & SON, Co. Gent. office, Albany.

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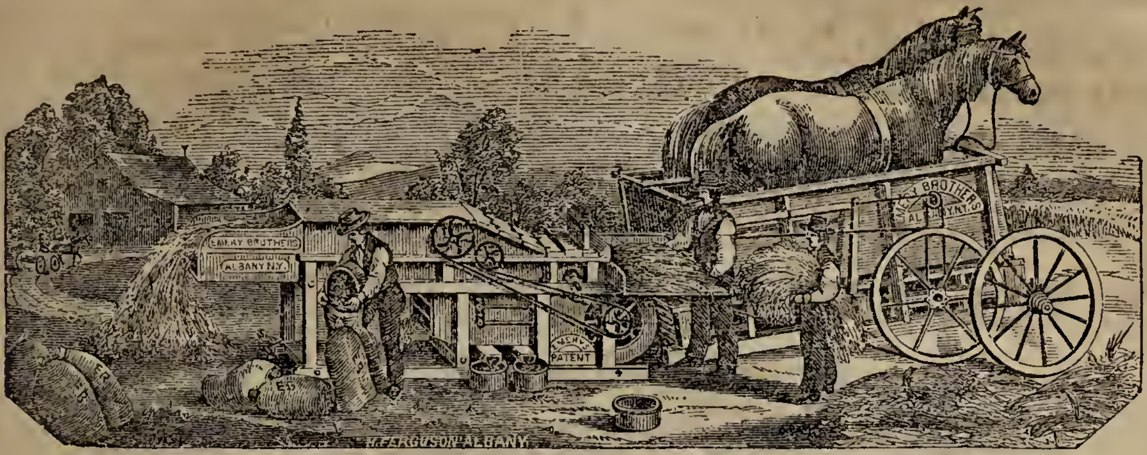
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PATENTEES AND MANUFACTURERS OF

EMERY'S PATENT CHANGEABLE RAILROAD HORSE POWER.

ALSO LEVER POWERS,

For Four, Six and Eight Horses, of new and superior construction, together with a great variety of labor saving

AGRICULTURAL MACHINERY,

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GENERAL DEALERS IN IMPLEMENTS AND SEEDS.

HORSE POWERS.

It has ever been the aim of the proprietors to make none but the first class of work, and always use the best materials and workmanship. In the construction of their Horse Powers they have endeavored to adapt them most readily and advantageously to the great variety of purposes, required by the Farmer and Mechanic. The same considerations have guided them in the construction and adaptation of the various Machines made and sold by them, and to be driven by the power, in calculating their various velocities, forces, pulleys and geers required to enable them to operate to their maximum efficiency, which is the great secret of their success.

THRASHING MACHINES

WITH

SEPARATING AND CLEANING ATTACHMENT,

Combined and adapted for all kinds and conditions of grain, &c.

This machine is the greatest success in its line yet produced. It can be operated with two horses as easily, and with equal results, as the ordinary thrashing machine without the cleaning attachment; while its capacity adapts it equally well to the force of four or six horses.

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It is complete in one frame. Very compact and simple—runs light, still, and without any concussion from its moving parts. It has been very extensively used during the past two harvests, and its superiority over any others in market established beyond question, and considering its capacity and cost of construction it is at least fifty per cent. cheaper than any other similar machine in use.

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This is a new Machine comparatively, and is believed to be one of the best Machines for the purpose ever made; can be driven by one, two, or more horses at a high or slow velocity, and do equally good work, and with wet and bad, as well as good condition, of the clover chaff. It cleans the seed and delivers it fit for market at the same operation.

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For Power and Hand use, with and without Press attached. These Mills and Presses are of a superior style and utility to any others in use.

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WITH

COTTON LINT CLEANER AND CONDENSER.

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constantly on hand, embracing a large and selected assortment of Plows, Harrows, Cultivators, Dog Powers, Churns, Cheese Presses; also Forks, Hoes, Shovels, &c., always on hand at the lowest manufacturers' terms.

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ILLUSTRATIONS AND DESCRIPTIONS,

together with ample references and indexes as well as the Prices, Terms of Sale, Weight, Cubic Measurements, Capacity, Directions for use, Durability and Warranty of their

MACHINERY, IMPLEMENTS AND SEEDS.

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May 9—w&m2t.

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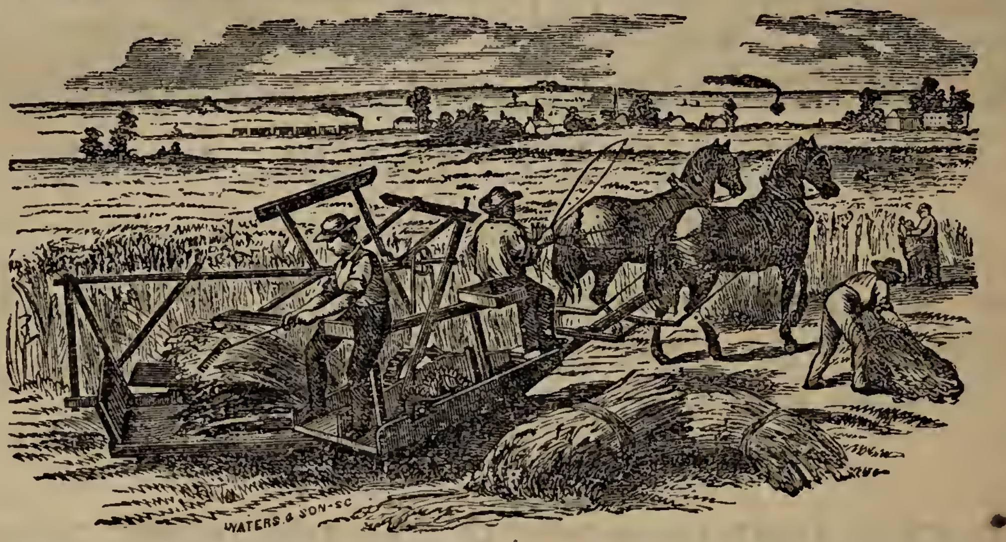

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In Tracts of Forty Acres and upward on Long Credit and at Low Prices.

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ILLINOIS CENTRAL RAILROAD COMPANY.

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The State debt is only $10,106,398 14, *and within the last three years has been reduced* $2,959,746 80, *and we may reasonably expect that in ten years it will become extinct.*

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at six per cent per annum, and six interest notes at six per cent., payable respectively in one, two, three, four, five and six years from date of sale; and four notes for principal, payable in four, five, six and seven years from date of sale; the contract stipulating that one-tenth of the tract purchased shall be fenced and cultivated, each and every year, for five years from date of sale, so that at the end of five years one-half shall be fenced and under cultivation.

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Pamphlets descriptive of the lands, soil, climate, productions, prices, and terms of payment, can be had on application to

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For the name of the Towns, Villages and Cities situated upon the Illinois Central Railroad, see pages 188, 189 and 190 Appleton's Railway Guide.

THE CULTIVATOR.

THIRD] TO IMPROVE THE SOIL AND THE MIND. [SERIES.

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Editorial Correspondence.

The Agriculture of Chester County, Pennsylvania---I.

PHILADELPHIA, June 17, 1861.

For its excellent grazing lands, its tidy farming, and its commodious barns, Chester county in Pennsylvania, has long enjoyed a wide reputation. During the past week I have had the opportunity of carrying out a long cherished desire to see upon what grounds this reputation is based; and to the invitation of J. LACEY DARLINGTON, Esq., Secretary of the County Agricultural Society, and the kind attentions of himself and D. B. HINMAN, Esq., its President, I am indebted for a delightful visit, the notes of which are now submitted in part, to the readers of the COUNTRY GENTLEMAN.

Chester county lies in the form of an irregular pentagon, with the Schuylkill river and Montgomery county upon its northeastern line, Berks upon the northwest, Lancaster on the west, Maryland on the south, and Delaware State and Delaware county on the southeast. The surface is very well entitled to the appellation of a "rolling country;" for, without being sufficiently broken to render it, except in rare instances, too acclivitous for cultivation, it has nothing like plains or prairies within its bounds, and it varies several hundred feet in elevation from point to point, without containing anything like a mountain, and so gently that the highest summits sometimes seem scarcely entitled to the name of hills in the ordinarily precipitous acceptance of the word. These summits, nevertheless, command grand views of the surrounding vales; while they are often, if not perhaps as a general thing, equally as fertile as the lower lands—the exceptions to this rule being rendered such by differences in the geological formation beneath them. The valleys are as winding and varied in form as the undulating heights that overlook them, with the exception of the "Great Valley," as it has been called *par excellence*, or "Chester Valley" in more modern parlance, which runs nearly east and west all the way across the county; bounded on the south by a range of hills, underlaid with a slate formation, constituting probably the least valuable farming lands in the county; having, beneath the course of the valley itself that extensive deposit of lime-stone which has done so much to advance the agriculture of this whole region; and, stretching away upon the north, another range of highland, similar in geological character to the largest part of the country around—that is, resting upon gneiss and mica slate. Beside the long and narrow limestone region in the great valley, there are only a few scattered points at which this rock occurs; and when we add to what has been said above, the fact that a green serpentine here and there appears in spurs to the south of the slate range, and that a red shale is found just along the

Schuylkill, we shall have a tolerably complete idea of the geology of Chester. The soil is generally a rather stiff, sometimes quite a clayey loam; the subsoil almost universally clay, and while there are fields now and then which contain so many stones as to require a good deal of picking, and supply considerable stone wall, little of the land would be thought really *stony* by one who has seen those New-England districts, in which it seems as though the more that are taken off, *the more there are left behind* to impede the plow share and the hoe.

Having a surface thus varied, Nature has in great measure taken care of the *drainage* of the land. With the exception of occasional springy spots, where the outfall is obstructed, artificial drainage has not therefore been largely introduced, and there are perhaps as few or fewer waste and marshy lands here as in any district of equal extent in the country. What wet places do exist, are generally confined to a few acres, and on the best farms have frequently been already reclaimed by the construction of stone underdrains.

But Nature has done more than merely look after the general drainage of the soil. She has provided springs of the purest and softest water, from which almost every farm not only supplies its fields and buildings, but also in numerous instances propels its machinery, or at least carries this agent of cleanliness and comfort into every part of the farmer's dwelling. I doubt if there is any other district in which water rams for this latter purpose are so commonly in use, while some prefer a water-wheel and pump as a more permanent and substantial fixture. The spring-houses on the dairy farms facilitate the making of the best butter in warm weather; and such springs, with the clear trout streams which here as elsewhere accompany them, can scarcely be over-rated in estimating the agricultural resources of a country.

Through the heart of Chester county run to the southward the two main "branches," which unite, some miles after crossing the Great Valley, to form the Brandywine, the banks of which river are quite high and precipitous at several points, but more commonly resemble what our western friends style "bluffs,"—while its flats, nowhere very wide, are even more famous for their pasturage than any other grazing lands around. It was on some of these meadows, I believe, that the late James Pedder once said he could almost accept the punishment of Nebuchadnezzar with a cheerful heart. The cattle at least enjoy being turned out to grass upon them, however it might be with man.

To render the picture of Chester county and its agriculture more complete, I should add that probably twelve or fifteen per cent. of its lands are under wood. As this is scattered about, in wood-lots upon every farm, the views from prominent elevations always include shade enough to render the landscape a peculiarly charming one; but it has been an article in the creed of most Chester farmers, that no trees are wanted in the fields themselves. The most common style of fencing is with rails, either laid in worm-fence fashion, or what is very common, inserted in morticed posts—the latter making a neat and serviceable enclosure, except that the posts will rot off about once in every fifteen years. There is a good deal also of stone-wall, but in a latitude where the winter season is a constant succession of freezings and thawings, there seems to be somewhat more difficulty than there is with us in preventing tumble-downs from action of frost. Hedges of the Virginia thorn are found to some extent, but are not nearly so common here as in the neighborhood of Wilmington, Del., where I remember having much admired their beauty several years ago.

The Agriculture of Chester County is exclusively of a grazing and dairying kind, including only about a sufficient extent of wheat land for the bread of those who cultivate it; enough oats, straw and hay for the farm and village horses, and enough of the two latter and Indian corn for the cattle and sheep which make the butter or are fattened for the Philadelphia butchers. It cannot be called a *breeding* country either, for most of the live stock comes from the western part of the State, from Ohio, and sometimes even from still farther to the westward, to be fed or grazed here for from six months to a year before it is finally marketed. But there is, nevertheless, considerable valuable stock bred both for beef or mutton, and for butter purposes; I was scarcely prepared to find the Alderney cattle, for example, so considerably diffused and so much in favor,—while the fact above alluded to, together with the skill exercised by the Chester farmers in the selection of their store cattle, deeply tinged with the Short-Horn blood of the West, renders the stock of the country superior as a whole, I think, to that of any district of equal area I have ever so closely examined. As to the swine, I need scarcely add that where the "Chester County" pigs are so commonly found, there must be a deal of fat pork cheaply made; all farmers do not have, by any means, what can strictly be called by this name, but the average character of the swine one sees, appears to be very good; and, where so much butter is manufactured, there must of course be many a populous sty to consume the buttermilk to advantage.

The great beauty of Chester County farming is its *neatness*. As we drive through the roads or walk from field to field, there are no ugly fence-corners full of briars and weeds; the wheat and oats are remarkably clean of these intruders, and some of the corn-fields are almost as perfectly weeded out as an English turnip crop. It was a good sign to see a man with a scythe at work along the roadside; for it bore witness to the care that is taken to cut off the vegetation there before its seeding time, as well as to that other scarcely less important fact that farmers here do not expect to keep a portion of their stock at the expense of their neighbors and the public.

The population of Chester county is largely composed of the descendants of those who first occupied its lands under William Penn, whose charter was dated precisely 180 years before the inauguration of President Lincoln, namely the 4th of March, 1681. While many of the young men have gone to other callings, there has never been a large emigration to the newer Western States. The farmers here have been stout to withstand innovation, and consequently somewhat slow to adopt improvements, adhering to a method of cultivation when once adopted with great tenacity; but, on the other hand, they seem to carry out a thorough-going system in what they do undertake, and to be "regardless of expense" on any point in which stability and permanence are concerned. Their houses are built of stone, roomy and commanding; many of them have already served for one or two generations and bid fair to stand for the use of many more. Their barns are also of stone, and with the sheds extending around for the shelter of stock and manure, resemble—to compare great things with small—some gigantic and motherly "biddy" with wings outspread for the protection of her quadrupedal brood. These buildings, both dwellings and barns—are generally rough cast with plaster or gravel coated, and then whitewashed; and this not only protects the walls against driving rains, but gives a tidy appearance to the farmstead, which, taken together with the size of the buildings, renders a Chester county farm-establishment something quite *sui generis* among American country homes. Another point that may be noted is the frequency with which the farmstead is found at a distance from the public road; a central location upon the farm having been quite commonly chosen for the sake of convenience in working it, instead of a site in which the farmer only consults the readiest mode of *getting away* from its duties to something else.

There appears to be a growing and already quite prevalent taste here, for fruits and flowers; and the Agricultural and Horticultural Societies have done much to promote improvement in this as well as in other and more practical directions.

To some of these practical improvements I hope hereafter to call especial attention, in giving a more detailed account of the way in which my time has been spent. In this hurried letter I desired to present a little outline of the appearance of the County and its farms to the eye; mainly to serve as an introductory sketch to what notes are hereafter to follow. I subjoin a list of the Officers of the Chester County Agricultural Society, which has not yet appeared in our columns, and shall have more to say hereafter as to the management and effective labors of this useful and energetic body.

Officers of the Chester Co. Ag. Society for 1861:

President—D. B. Hinman.

Vice-Presidents—Joseph Dowdall, Dr. J. H. Eshleman, M. B. Hickman, Col. Saml. Ringwalt.

Executive Committee—Lewis Sharpless, W. M. Woodward, Nathan Garrett, C. W. Robert, T. W. Cheyney, Wm. Gibbons, Wellington Hickman, Chas. E. Hiester, L. P. Hoopes, John Hannum.

Cor. Secretary and Treasurer—J. Lacey Darlington.

Rec. Secretaries—J. Bayard Jefferis, Wm. D. Sugar.

In the brief outline of Chester County farming already attempted, the connection was referred to that exists between the deposit of *limestone* in the Great Valley, extending for a distance of about sixty miles, from the Susquehanna to the Schuylkill,—and the progress of Agriculture throughout a large district both to the northward and the southward of this deposit. Lime burning has been practiced here for many years; the grandfather of Dr. Geo. Thomas,—who was one of the pioneers in its introduction, and who died in 1793,—having done much before his death to call attention to the subject, and having first employed lime on his own land, as we were told by Dr. T., probably about the year 1787. The adoption of the practice, however, only became general by degrees; those who were first convinced of the benefit resulting from it, had a comparatively high price to pay, and it was not until the proof of this benefit was made very clear indeed, that the kilns became numerous and the farmers' teams began to cluster about each one, from distances of ten or twenty miles, as soon as the report went out that the freshly burned lime would be ready for delivery at a particular time.

As to the effect of lime, I was told of farms which would not cut half a ton of grass or five bushels of wheat per acre, by its application alone made to yield within four years, crops three times as large—say, a ton and a half of hay and fifteen bushels of wheat. Upon its first application I suppose that dressings as heavy as a hundred and fifty or two hundred bushels per acre may have been given; but the weight of experience appears to lean now to smaller and more frequent applications, and fifty bushels upon thinnish land, and one hundred on the best and strongest soils, put on at intervals varying from six to ten years, or thereabouts, may be regarded as the customary rule. Employing the one apparently unvarying rotation of corn, oats and wheat, followed by grass, circumstances regulate the length of time that shall elapse before the grass is again broken up for corn, when, almost invariably, the liming is renewed. If, as is quite common, the grass is mown for two seasons and pastured two more, the rotation becomes one of seven years, with a liming always at its commencement; but if the pasturage is extraordinarily good, it may remain eight or ten years before being broken up,—in rare cases perhaps receiving a top-dressing of lime during this or a still longer period, although such a mode of farming would be regarded as out of the usual routine.

The generally excellent natural drainage of the land, already referred to, doubtless renders the efficacy of lime peculiarly great on the soils of Chester; for I suppose there is no fact more clearly proven, than that its action is at best exceedingly imperfect where stagnant water approaches the surface, or where even the escape of that which falls in rains is seriously impeded. Upon land seeded down to clover and timothy,—the natural grass of the region—the *poa pratensis* of botanists, the "blue grass" of Kentucky, the "smooth stalked meadow grass" of English writers, and the "green grass" of Pennsylvania and Delaware—here comes in of itself, together with white clover, forming a fine compact sod; upon turning under this sod, preparatory for a renewed course of cropping, the decomposition of its matted roots and stems is accelerated by the action of the lime, and they are at once made available for assimilation by the ensuing grain-plants, while at the same time the soil appears to be rendered mellower in mechanical condition, and cleaner of weeds. It is probably in these respects that the application of lime so frequently as once in six or eight years, is found to be warranted by experience, although there are some who question whether this course is not now adhered to from long habit, rather than from certain evidences of its necessity.

Again, I suppose it is an accepted fact, that the repeated application of lime as a sole dependance without the use of stable manure, or without *allowing the land to lie in pasture* for a due proportion of time, is rather exhaustive than beneficial in its effects, by drawing too heavily and rapidly upon the vegetable constituents of the soil. But in Chester county, much attention is paid to the management of manure, and as it is a grazing country, there is no temptation to break up pastures prematurely. As I was returning to Philadelphia in the company of M. B. Hickman, Esq., an extensive and observant farmer, I inquired whether, after the application of lime for so long a period of years, there had been any symptoms of decline in the production of the land or diminution of the benefit derived from it; his answer was decidedly in the negative: those who "limed most, have been pretty sure to manure most," they are the best and most careful farmers in other respects, and their land is constantly advancing in productiveness. In the days before liming, a farmer on 200 acres was a "poor man." He thought that during the past twenty years particularly, the custom of liming had advanced with great rapidity.

The size of Chester County farms varies, of course, quite widely—say from less than a hundred up to here and there one of three or four hundred acres; but perhaps the average size is about 150. I was told that the character of the farming I saw within a circuit of ten or fifteen miles from West Chester should be taken as not more than a fair sample of that throughout the County at large—a surface of four or five hundred thousand acres; or to arrive more nearly at a general estimate of the farming throughout the county—dividing it, for the sake of an estimate into these three classes—that if *one-fifth* could be rated as "poor," and *one-fifth* as "medium," the other *three-fifths* would justly rank as "good." Near villages the land is rated at from $125 to $150 per acre, with some higher figures for extra improvements, and $100 is regarded as a fair price for good farming land anywhere in the county. A farm of a hundred and fifty acres may have fifteen or twenty in wood; on a farm of this size there will very likely be bought a hundred sheep for pasturing during summer, sold fat in autumn, a breeding flock kept, numbering 20 or 30 head, and about 30 bullocks purchased in autumn, wintered on hay with little or no grain, and fattened on the pastures to go to the butcher along about harvest time. Four or five horses will be thought enough to do the work of the farm. If the farmer is himself a man of close attention to business, one assistant engaged by the year is all that he needs, with extra hands at harvest, and perhaps at corn-planting.

The contents of the barnyard go to the oat stubbles before plowing for wheat, which, as well as oats, is always drilled in. As to plowing, there is an ancient notion still very prevalent that about *three inches* is the proper depth for corn—the average would not be more than four inches —while for other grains they go a little deeper. But the more intelligent farmers are getting to think more favorably of plowing to a somewhat greater depth, and subsoiling has its advocates and some who practice it. Mr. DARLINGTON's experience in nursery cultivation has shown very plainly the advantages of using a "double Michigan" that will go down 15 or 16 inches, and he says that he "could not grow fruit trees without it." Not only would deeper plowing enable the plant roots to penetrate farther, so as to stand better during seasons of drouth; but it is also a common opinion—at least I heard it so expressed in England —that lime *sinks* by degrees below the reach of the root, and that subsoiling or deep plowing tends to keep it longer within an accessible distance, or to bring it again within reach, if already gone below it. The depth of the upper soil is sometimes ten inches or more, but the yellow clay below, if turned up in autumn, and exposed to the action of the winter frost, is not found by those who have fairly tried the experiment to have any deleterious effect upon the crop that ensues. The plow commonly in use, called the "Wiley plow," was invented by a man of that name at Kennett Square, and the castings are made for it at Peekskill, in this State—it is employed for grain crops, and will run six or eight inches deep; the plow common for sod plowing is an old implement known as the "bar-share." The use of the drill, as already intimated, is universal, and the roller is quite frequently employed before drilling, or in spring on the wheat land, if the frost has thrown out the roots, or more particularly to prepare the surface better for the use of a reaping machine. Of wheat, a bushel and a peck to a bushel and a half, is the common amount of seed per acre; of oats, two to two and a half bushels. No *spring wheat* at all is grown.

The *corn* is the large Southern, running up sometimes to a height of 12 or 15 feet, so that "a tall man can with difficulty hang his hat on the ear." The distance is four feet each way—three or four stalks to the hill, seldom more than one ear to the stalk. All the cultivation of the corn is done by horses—the cultivator employed being two feet two inches wide, so as to lap a little in running twice between the rows. It has five teeth, two on each side and one on the center-piece of a triangular framework; and as the two on the side that runs next to the corn hills are placed respectively nearest to the point and end of the implement, by a little skill in *steering* the thing, a careful driver may slightly vary his course so as to get the space in the rows between the hills pretty well stirred by the hindermost tooth, and not interfere with the stalks of the corn itself. As to the *roots* of the corn, there is probably not much doubt that in any such wholesale system of cultivation they must suffer more or less abridgment, as it is scarcely possible so to adjust the machine as to depth and distance as to cut off all the weeds and leave the plants entirely untouched. But this evil of horse cultivation as compared with hand-hoeing is doubtless much more than counterbalanced by its cheapness and the greater frequency and promptness with which it is performed. On the best farms seventy-five bushels per acre is not an unusually heavy crop, but the average, of course, is below this figure.

Our first day's drive, June 13th, carried us in a northerly direction from West Chester, across the Slate ridge to Oakland in the Great Valley. We stop, soon after setting out, at a commanding point on Cemetery Hill, for the prospect's sake; and the fine sugar and silver-leaf maples that shade the pleasant streets of West Chester borough, continue here and there to stretch their graceful boughs over the country roads and lanes. We pass, not far away, extensive marble quarries now unworked, but supplying an excellent quality of this material for the purposes of the architect. Just back from the Oakland station, we climb the hill—pausing at a smith's to scrutinize the different styles of cultivator teeth newly re-pointed before his door—and here we overlook the course of the Great Valley for many miles—a view still more extensive when the heavy foliage of the trees is stripped away in Winter, and variegated with the most brilliant of colors when the frosts of Autumn are at work among the maple leaves. We can judge something—as we glance along the farther slope of the Valley—of the proportion of land, in each farm, under wood; while the brown surface of fields as yet but faintly dotted with the growing corn, or the wavy ripples coursing with every breeze over the headed wheats, enable us also to distinguish beween the farmer's grains and grasses—pasture and meadow land far exceeding in proportion that which shows these signs of recent tillage. Thence to the farm of Dr. THOMAS, which gives its name to the railroad station, and which stretches across the Great Valley, and forms a part of the 5,000 acres which Richard Thomas or Ap Thomas held eight generations ago, by direct purchase from WILLIAM PENN—a purchase at 50 cents per acre or thereabouts, much of which still remains in the possession of his direct descendants, in whose hands it has reached its present value of two or three hundred times the original cost, and one or two of whom hold their farms to this day by inheritance from father to son, *without any other title on paper or of record*, than the original deed under the sign manual and seal of the founder of the State.

But we need not go back a hundred and eighty years for reminiscences of interest in a locality so rich in historical attractions to every American. The residence of Dr. THOMAS stands now—with some additions—as it stood during the days of the Revolution; and the walls of the very room in which we first sit down—a spacious apartment, indeed, ninety years ago—witnessed the silent gatherings of the Friends, while their regular House of Meeting was doing patriotic hospital service for the many sufferers from the Camp at Valley Forge, six miles away, during that long, weary, freezing winter of 1777–8. Here, in those times of trial, the prayers of the non-combatant could at least be offered up in behalf of the great Leader then straining every nerve in a good and glorious cause; but in these later days—testing a second time our devotion to the Country and the Union for which he fought and prayed—the bonds of the creed of brotherhood and peace appear to have somewhat relaxed their hold, for the descendants of those who then could only pray for the triumph of the right, or watch at the bedside of the wounded, are now many of them shouldering the musket, and making their way toward other camps at Harper's Ferry or Richmond. May they soon, with others as gallant and true, conquer the peace which was so dear in the faith of their fathers!

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ICE-HOUSES.

We have recently made some experiments with ventilating ice-houses, showing the great advantage of admitting *warm air* to the sawdust which covers the ice at the top. A house, with double walls filled with sawdust, received last winter its usual supply of ice; and the upper door, through which the ice was passed, carefully closed. It was found this summer to be rapidly melting. The door was opened, and the melting ceased. This has been since repeated, and invariably with the same results. When the door is closed, and the air above the ice thus enclosed, becomes cold, the ice sinks away; when it is opened, and air admitted freely from the outside, the melting ceases. This will perhaps be accounted for in different ways by different persons, but the true explanation is probably this: When the door is closed, the air above the ice is reduced in temperature, and as a necessary consequence becomes heavier and sinks or forces its way downwards through the sawdust. Its temperature being above freezing, (although much below that of the common air,) it carries a constant stream of warmth to the ice and melts it. When the door is thrown open, and the air outside freely admitted to blow over it, this air cannot become cooled, and does not sink, and the ice is unharmed.

We have many inquiries from our correspondents, why their ice melts away so rapidly. As a general answer we might say, you take too much pains in building tight ice houses. *We never saw ice keep better than in a board shanty.* The air must blow freely over the top of the sawdust, and this shanty was open all around. A rough floor admitted free drainage; about eight inches of sawdust was spread evenly over this floor; the ice then built up in square blocks, leaving about eight inches around next to the siding of the shanty, which was filled and *packed in* as the structure of ice went up; and lastly, the top was covered with about eight inches of sawdust. This was the whole process. The ice kept perfectly; was used all last summer, and about two tons, which was left over was thrown out last winter, when the building was refilled. A thickness of eight inches of packed sawdust may be regarded as a perfect non-conductor of heat, for all practical purposes—perhaps six inches would do, if fine and evenly packed. If not packed, it may have cavities or orifices, and admit enough warm air to melt the whole.

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GEN. GOE'S ANNUAL SHEEP SHEARING.

Gen. JOHN S. GOE, the well known breeder of improved domestic animals, held his annual sheep-shearing for the present year, on the 30th of May, at his residence near Brownsville, Pa., when a committee was appointed, of which J. G. Strean, Esq., was President, and J. Worthington, Secretary, to superintend the shearing, weigh the fleeces, and to report on the stock generally. A copy of their report has been sent us, from which we learn that the fleeces of five Spanish Merino rams, unwashed, averaged 11 lbs. 5½ oz. each—that the fleeces of ten do., washed, averaged 8 lbs. 13 oz. each. The fleeces of 42 Spanish Merino ewes, washed, averaged 5 lbs. 15 oz. each. The committee speak of these sheep in the highest terms, as they do also of Gen. Goe's breeding horses, cattle, swine, &c. He is also breeding the Cashmere Goat from animals procured from the celebrated flock of Col. R. Peters of Atlanta, Geo., which the committee say are beautiful animals, and readily adapt themselves to the climate. The fleece of a Cashmere buck weighed 2 lbs. 3 oz., and that of a doe, 2 lbs. 12 oz.

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MARAUDING CATTLE.

Cattle may be educated into almost anything. A quiet cow may be converted into a skillful jumper in a single season. The first requisite for such training is short feed, resulting from overstocking. The second is low fences; and the third, tempting crops of corn beyond these low fences. In the spring grass is usually good, and corn and other crops are small and uninviting; but during this present midsummer period, when pasture is dried up, the process often begins. One or two rails are accidentally knocked or blown from the fence; the quiet and orderly animals stretch their heads over to reach a morsel of the tall grass; they throw down accidentally two or three more rails, and finally leap over. The owner drives them out as soon as they have learned the difference between delicious food on one side and short commons on the other, and puts up a rail. They have already learned to leap a little, and the next day they improve and go a rail higher. Another rail is added, and the process is repeated until they become quite expert.

It is now a very busy season, but the farmer should not neglect his fences; if rails are thrown down, replace them before cattle find it out; keep fences high at all times; and if the animals should actually break through, add rails enough to make the barrier entirely impregnable at once.

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CHAFF IN ANIMALS' EYES

Cattle which eat straw from a stack, or thrust their heads into large piles of straw, sometimes get barley beards or oat chaff into their eyes, inflaming and shutting the eye, causing the flow of water from it, and sometimes producing blindness.

S. E. Todd states in the Ohio Farmer, that after trying for a cow partly blinded with oat chaff, the various remedies generally prescribed, including powdered burnt alum blown into the eye, the use of honey, &c., to no purpose, he found the best remedy, and one entirely effectual, was to take a silk pocket handkerchief, draw it tightly over the end of the finger, and after having raised the lid as much as practicable, thrust the covered finger carefully into the eye. The chaff adhered to it, and was at once brought out. He has always succeeded with this remedy. If the finger is not large, it may be passed all around the ball. The animal, if not gentle, will require tying.

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[For the Country Gentleman and Cultivator.]

Pitching Hay with a Horse Fork.

A little good skill is as necessary when pitching with a horse fork, in order to do it with ease and rapidity, as it is when pitching with a hand fork.

If a load is heaped up in the middle, thrust the fork into it, at a little one side of the highest place, and take up a small forkfull; and if a load is about level, or even on the surface, take a forkfull at each end first, and then you will be able to get one of good size in the middle. But when the fork is thrust *first* into the middle of the load, it will sometimes lift and tear out more than can be elevated, and it will be necessary to release a portion of it; and then it will be difficult to get a forkfull of a good size. But, by standing a little one side of the middle of a load, and by handling the fork right and left, and then directly before you, the forkfulls will come up with far less force than when the fork is thrust in at random. A man who has but little skill, will often make very laborious and slow work, when pitching with a horse fork, and will make very hard work for a horse also.

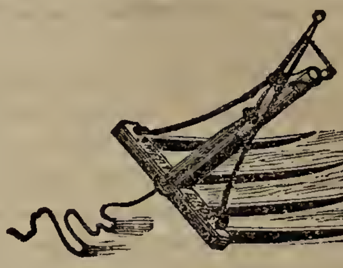
Which is the Best Kind of Horse Forks?

They are all the best according to the recommendations of their respective manufacturers; but for the benefit of beginners, I will simply point out the imperfections of some, and the great superiority of one kind over another.

The ordinary fork—i. e. the kind which has simply a long handle inserted in the same head where the tines are fastened, and which, when it is in operation, must be kept in the proper position by means of a balance rope attached to the end of the handle, is better than some, and not so good as others. The objections to it are, it requires the strength of a man to work it, and it is sometimes very hard work to use it; and a large space is very necessary, or it cannot be worked at all; and more than all else, if a horse exerts a force sufficient to elevate two hundred pounds of hay with one of this kind of forks, half of that force is consumed to no good purpose at all, in consequence of the very disadvantageous manner in which the force is applied in pitching. When, for example, there are one hundred pounds of hay on the fork, the workman must necessarily pull down on the handle enough to balance that one hundred pounds; and therefore, the horse must exert force enough to draw up two hundred pounds of hay, when there are only one hundred pounds on the fork. It is very like putting a bushel of grain into one end of a bag, and a stone in the other end to balance it, and hanging it across the back of a horse, as our ancestors were wont to do when they went to mill.

There are the same objections to the kind of horse-fork which has two ropes at the end of the handle—a balance rope and a latch rope—that there are to the kind already mentioned. This last mentioned is very objectionable on account of *two ropes* to be handled, when one is as much as a man knows how to get along with; and more than this, there is a great objection to the hinge near the head, as it renders it more complicated, and more liable to get out of order. The one having a hinge and latch is a little more convenient, in some places, than the one with a handle rigidly secured to the head.

Now we come to the *best* kind of horse forks. It is *best*, because it is *more convenient* than either of those just alluded to; it costs less; it will take one hundred pounds of hay with about half the force of the horse that the others require; it needs no balancing, and, consequently, the man who pitches, has comparatively easy work; it will work in less space than either of the other kinds, and a very important feature of this fork is, after a forkfull has been elevated above the mow or stack, before it is dropped, the horse can be backed up and the forkfull lowered, and swung off to either side of the mow, and dropped where it is needed. This cannot be done with the other kind of forks, because as soon as we begin to lower them a little, the hay will slip off the fork.



The above illustration represents the best kind of horse fork now in use. It can be procured of Emery Brothers in this city, and also we presume at R. L. Allen's Ag. Warehouse, New-York, and at Paschall Morris' do., Philadelphia—price $7.

The chief difference between this kind of forks and the others is, the handle of this is inserted in the head at nearly a right angle to the tines, and the draught rope is held at the end of the handle by means of a latch which is unlatched by a small cord. S. Edwards Todd.

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Dried Plants from Oregon—How to Dry Plants.—The large collection of dried plants, which a correspondent has kindly sent from Oregon, we regret to say, is not in a condition for examination and for identifying the species. Either very small portions of the plants are given, or else they are so folded together that it is impossible to open them out without breaking them to fragments in their dry and brittle condition. Instead of being folded up to a surface of only one inch by four, as they were, many plants require to be placed in folds of paper, at least eight inches by a foot, or larger, in order to exhibit the different parts of the plant. We hope our correspondent will try again, and give us more perfect specimens, and it will afford us pleasure to give him the names.

The best herbariums, or plant cases, have folds of paper about a foot wide and a foot and a half long; half this size will answer tolerably well for most plants. When they are two or three feet high, as much as possible must be given in connection with the flowers, and when the leaves are of different shape below, they must be given separately. Tall, slender plants, may be sometimes doubled, but the parts not folded together.

The easiest mode to dry plants, is first to procure a quantity of old newspapers; fold them together of suitable size; then place the fresh plant, when in flower, between the folds, and bring the folds together, spreading out the parts of the plant at the same time, so that the whole may have its natural attitude as nearly as possible. Lay a board on the paper to keep it to its place; and when the desired number of plants are thus prepared in separate papers, lay a stone or other weight of several pounds upon the board, and let them remain a few hours or over night. The paper absorbs the moisture of the green plants, and becomes quite damp in a few hours. Then open the pile, and place each paper, with the plant within its folds, on shelves or over the floor, for two or three hours, longer or shorter, according to the dryness of the weather, until the papers are dry, but not until the plants curl up. Then place them under the stone again, for a day, and repeat the drying process. Increase the weight as they approach thorough dryness. Only one plant (unless quite small) should be placed between the folds of a single paper. When perfectly dry, take them out, and several may be placed in a fold, for keeping, or sending to a distance. Mark the time they flower on a slip of paper attached to each, whether growing in wet or dry ground, on rocks or in swamps, woods or open ground, wild or cultivated; number each, and forward them to us between stiff pasteboard, to prevent their breaking. Postage from Oregon 2c. per oz.

[For the Country Gentleman and Cultivator.]

FARMING IN NEW-HAMPSHIRE.

State of the Crops.

Messrs. Eds.—During the past week I spent several days in visiting some of the farms and farmers of Merrimac Co., N. H., and jotted down a few notes in reference to the growing crops, and the management of some of the farms I visited.

Up to about the 10th of June, the season was wet, cold and backward, and many of our farmers were late in sowing and planting, and from using bad seed-corn many had to replant, so that many fields I saw were looking anything but promising for a good crop. But the larger portion of the fields I noticed, were of a good dark green color, more especially where superphosphate of lime or other manure had been used in the hill. I presume there has been ten times the quantity of superphosphate used in our county this season over that of any previous one, and if the difference is as great in the yield of corn at harvest as in the growth of the plants at the present time, between those receiving the phosphate and those not manured with it, the manufacturers of a good superphosphate need not fear overstocking the market another season. But, by the way, farmers should understand there are other valuable concentrated manures beside superphosphate, some of which are equally good and vastly cheaper, to which I will allude hereafter.

For the past three weeks there has scarcely been rain enough to "lay the dust," and most of the time it has been comfortably warm, with much drying winds, so that the grass and grain have suffered badly for lack of rain, upon the light dry lands—and I saw hundreds of acres of June grass and clover that ought to have been put in the barns last week; but on the heavier and naturally moister lands, the crop of hay will be large, and of first-rate quality—as it is one of those seasons that occasionally comes round, when there is an extraordinary amount of red and white clover mixed with the long-leafed grasses in the old mowing fields and all our wet runs, thus nearly or quite doubling the quantity and value of the hay crop over that of some other years. Why it is that such a superabundance of clover should thus suddenly make its appearance for one or two seasons, and then as suddenly disappear for a number of years, is perhaps a matter not so easily solved, though it is possible that a "natural rotation of crops" may have something to do with this and similar phenomena.

The growth of clover in this section, on the fields laid down to grass in 1859 and 1860, is very heavy—as good as can be found elsewhere; and this fact proves conclusively that clover can be successfully grown on other than limestone soils. The growing of clover does not wholly depend either upon the greater or less amount of lime or ammonia a soil may contain, but mainly upon a good supply of some nine or ten kinds of available mineral matters in the soil. The carefully conducted experiments of Messrs. Lawes and Gilbert, "with different manures on permanent meadow lands," puts this question beyond all cavil.

Within the past ten years the farmers in this region have gone somewhat largely into the growing of winter wheat. In my jaunt I saw, perhaps, towards a hundred fields, many of them first rate, but a majority of them were more or less mixed with rye, and in some fields, the owners will harvest more rye than wheat. To my view, this smacks strongly of carelessness and bad calculation on the part of the farmers. It is just as easy to raise pure wheat, as a mixture of wheat, rye, chess and cockle—besides, clear wheat makes the best bread, and always commands a higher price in the market.

I have read much discussion in the agricultural papers, in respect to the object of the yellow bird in stripping the heads of wheat while the grains were in the milky state—some writers, giving it as their opinion that it was the soft milky kernels that the birds were after—others asserting it was the orange colored midge they sought. From careful observation, I am fully satisfied that it is the soft grains of wheat they seek, and not the midge, for up to this date July 2d, after the most diligent search, I have not found the first midge in my wheat, while hundreds of heads have been completely *shelled* by large flocks of yellow birds. The sweet milky kernels are choice food for these beautiful but thievish pests.

The prospect for fruit is not very promising. The great yield of apples last year sapped the trees badly, and the past winter, from some inexplicable cause, was a hard one on fruit trees, vines, &c.

A large portion of our old pastures are being badly over run with brakes, ferns, white weed, hardhacks and other useless intruders—in consequence of which, the feed is poor, scanty and innutritious, and every year growing worse. How the rocky, steep hillside pastures that are now so poor in feed, are to be *profitably* renovated and made to produce good succulent feed, is a question not easily solved. The daisy or white weed, on many farms I noticed, has obtained permanent foot-hold, and some mowing fields I saw, were nearly as white with the blossoms of the weed, as they were last winter when covered with snow. This weed, when first introduced upon these farms, might have been exterminated, root and branch, by a few hours of well directed labor—but when it once gets disseminated over several acres of a farm, it is a *real cud* to completely oust it, as I have found by over twenty years battling it. However, by perseverance I have come out "first best" in this warfare with the daisy.

Farming of Col. D. M. Clough.

I took notes of some things I saw and learned at two of the farms at which I spent a few hours. The first was owned by Col. D. M. Clough, beautifully located upon the east side of the Merrimac river, opposite the pleasant village on Boscawen Plain. The farm buildings are about 50 rods from the river—half a mile from a depot on the Northern railroad, and a fourth of a mile from the depot on the Concord and Montreal railroad. The home farm contains 500 acres, 200 of which are alluvial or intervale; 150 is above high-water mark, every one of which is plowable. The low intervale produces heavy crops of blue joint and other natural grasses.

Mr. C. has planted much less corn this than in previous years, having but five acres in corn, 3 acres of potatoes, 23 of oats, 1½ of barley.

It is six years since Mr. C. purchased the farm, which was badly run down when he came in possession of it. It had been rented for 25 or 30 years previously; the object of the occupants being to obtain the greatest returns for the least amount of labor and manure expended. Six years ago there was less than 25 tons of English hay cut upon the farm, and about the same amount of poor or low ground hay. He now cuts 70 tons of English, and 30 tons meadow hay.

The large old mansion house has been remodelled and handsomely fitted up. The old barns have long been taken down, and a splendid one, 110 by 41 feet, with 19 feet posts, has been built. The exterior finish of the barn is the same as that of the house, viz., clapboarded and painted white; the interior is finished to correspond. The hay is driven into the eastern end of the barn, the upper floor being 16 feet above the sills, so that the pitching of his 100 tons of hay is *down* instead of *up*. The basement or cellar extends to the same length and width of the barn, the north side and ends being handsomely walled. The south side of the cellar is open, the bottom of which is on the same level with the yards, of which he has four, with a full supply of water in each.

His grass is all cut with a mowing machine, and raked by horse power. He thinks his hay can be cut and placed in the barn at a cost not exceeding two dollars per ton.

He keeps about 70 head of cattle, with horses and sheep to match, and from 6 to 10 hogs, which he keeps profitably employed in composting muck, clay, and manure. This is the great secret of his success in improving the farm. He has cut a ditch over a mile in length, from 3 to 7 feet deep, draining some fifty acres of alder, and other swampy land, which is fast being brought into a good quality of grass. By draining the swamp he has access, at all seasons of the year, to inexhaustible quantities of excellent muck, and within a few rods of his barn he has an abundance of clayey marl. The muck and marl composted, proves quite as valuable on his worn out alluvial soil as yard manure.

As confirmation of the foregoing statement, I must give the following facts: In 1859 he had 13 acres of inverted sod land heavily manured, planted with corn—next year sown with oats. In the spring of 1860 he plowed five acres adjoining, manuring wholly with a compost of muck and marl, and sowed with barley; both the oats and barley gave a heavy yield last year, and now the 18 acres have a very heavy growth of clover and other grasses. But the crop on the muck and marled portion of the field, is much the heaviest, portions of which were badly lodged last week, and need cutting.

Last year he had a field of six acres in corn, adjoining which, last August, he turned over five acres; and by the side of this last he plowed five acres more of sod land in May of this year. The inverted sod land was manured this spring, and the whole field, (16 acres,) sown with oats and grass-seeds—the oats on the five acres plowed in May being much the best; those on the August plowed land being much better than those on the corn stubble ground. The land is much infested with twitch grass, and Mr. Clough supposes, on that portion of the field plowed this spring, the oats got the start of the twitch grass, which accounts for their greater growth.

With the manurial resources of the farm, and the skill and energy of Col. C. and his sons, we believe he may profitably double the crops upon his farm in the course of another six years. He has the means of cheaply irrigating several acres of his mowing grounds, as also his spacious and well kept kitchen and fruit garden.

It is a standing rule with Col. C. in his farming operations, to stock down no land to grass unless it is in a much more fertile condition than when broken up for the hoed crop—a rule every farmer should adopt and rigidly carry into practice. If such was the general practice of farmers, we should hear less of short crops, exhaustion of soils, and "the prospective sterility" of our cultivated lands.

Farming of Hon. W. H. Gage.

About three miles south from Col. Clough's farm, is that of the Hon. W. H. Gage, one of the most beautiful and highly productive farms in the county. It is located on the west side of the Merrimac river, half a mile from the large and (till recently) thriving manufacturing village of Fishersville, which affords a home market for all the surplus products of the farm—and this too without the agency of "middlemen," that too often step in between the producer and consumer, to the great injury of both.

The farm contains about 500 acres—150 of which is covered with a valuable growth of wood and timber; 150 acres of intervale—100 of which is plowable, the balance yielding a heavy growth of low-ground hay, making what is here termed a fair quality of stock hay. Being overflowed by every freshet, the sediment left by the retiring waters keeps up the fertility of the soil year after year, rendering any other manuring unnecessary. The balance of the land is in pasture and upland fields.

He usually plants six acres with corn, the land being heavily manured—three acres of potatoes, and two or more in beans, roots, garden truck, &c., and this year has some eight to ten acres of oats, barley, &c. Cuts about 125 tons of hay annually—selling from 25 to 30 tons in the field, not having barn-room to stow away near all the hay, fodder, &c., grown upon the farm. His largest barn, 84 by 42 feet—17 feet posts—has been built twenty-five or more years, was at that time considered the number one barn of the county; but hundreds of more recently built barns in the county, far outstrip in many respects that of Mr. G.'s. He has another barn about 40 feet square, besides sheds, cattle and sheep racks, and one of the best "pork-making" establishments I have ever seen, usually fattening eight or more large hogs. The farm stock numbers two horses, colts, three yoke of large oxen, eight cows, and young stock—bringing the whole up to 45 to 50 head; till recently, he has kept 120 or more fine sheep, but at the present time he has less than 100.

The northern railroad passes through the whole width of his farm. The corporation took 9 acres of it for the roads. The track was laid within two rods of his house, which obliged him to remove it several rods westerly, and it has been remodeled and finished anew, in modern style—such a residence as a hardworking, industrious and independent American farmer is entitled to. One of the large rooms of the house is finished entirely with that beautiful wood, the "American black cherry," and being beautifully varnished it compares favorably in appearance with good specimens of mahogany.

Mr. Gage, like Col. Clough, farms upon the principle of leaving all his hoed land in a much more fertile state when stocked down to grass, than it was at the time of "breaking up the sod," and plows no more than can be well manured and properly worked or cultivated, Therefore he does not raise so largely of grain crops as some other farmers do, as hay is the leading and most profitable crop in his location. Last year was rather a bad one for his corn, raising only about 320 bushels, the same amount of oats, 90 of rye, 40 of barley, and 500 of potatoes—besides beans, roots, squashes, &c., &c. Much discussion has been had recently in the Agricultural Journals, in respect to the profit of farming as an occupation. It is like all other business pursuits—good or ill success depends upon various contingencies, as well as upon the tact and good judgment, and business qualifications of the *man.* Mr. G. would be unwilling that I should here go into a history of his business matters, &c. But I will here just say, he, like thousands of our young men, started, when of age, upon the great voyage of life, without a dollar in the locker, and without entering into any hazardous speculations he has acquired a handsome estate. His farm would sell under the hammer for $25,000—and he has other resources which are the results of many years industry and attention to business. The example of such a man cannot but result in good.

July 4th.—Since writing the foregoing we have had some twelve or more hours of rain, which has produced a most striking effect upon our corn, grain, grass, and other crops. This rain insures an extra crop of hay—which was rather doubtful a few days ago.

Warner, N. H., July 4th, 1861. LEVI BARTLETT.

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[For the Country Gentleman and Cultivator.]

Grape Wine.

Wine may be made from the Isabella grape on a small scale, by picking the fruit in clear, dry weather, when *perfectly ripe*, and after picking out all the immature and unsound berries, put them in a tight box or tub and mash them with a pestle or pounder, having the lower end square. Reduce the fruit in this manner to a fine mass, *but do not break the seeds* while pounding. The next process is the extraction of the juice, which may be done by placing the mass in a coarse bag or sack, and submit it to pressure. If a cheese or portable cider-press is at hand, make use of it; otherwise place the bag between planks, and lay stones on them. When the juice ceases to run, remove the pomace to a tub, and after breaking the cheese fine, sprinkle on a quantity of clear, soft water, to dissolve and draw out the remaining juice. When all the juice is expressed—which is usually from 12 to 16 quarts per bushel of grapes—to each quart of the juice add half a pound of white granulated sugar, stirring and shaking it until the sugar is completely dissolved. Put the liquor into a cask, (clean of course,) which should be full, in order that the impurities may flow over by fermentation at the bung. Some of the liquor should be reserved in a pitcher or bottle, to fill up as often as it sinks below the bung. After it ferments eight or ten days, put in the bung tight, and let it rest in a cool, dry cellar; there to remain until March, when it should be racked off into a clean cask, well sweetened with a brimstone match burned within. As it undergoes several changes the first year, it is well to let it remain in that state until late in the fall, when it should be again racked of into a cask, and if it is not fine and bright, it would be well to fine it with sweet milk, or with the whites of eggs beat up with sand. In the course of a few weeks, if everything works favorably, it will be fine and bright, and fit for use. C. N. Bement. *Among the Green Mountains.*

SAVE YOUR SEEDS.

There are many kinds of garden seeds, wanted in small quantities, that may be more cheaply purchased at seed stores than raised at home. There are others which every farmer or gardener may raise and save for himself. Provided the work is well done, the more that each one saves for himself the better; for he may not only secure any excellent or favorite variety, and be sure of having the genuine sort, but he may be sure that his seeds are fresh, and not a portion of old mixed with new, as often happens when he obtains them from irresponsible sources.

Always select the *best* seed where the supply is abundant. If earliness is desirable in the variety, take those which ripen first. This will be necessary in order to *maintain* the character for earliness. The tendency is to run back, and this will be the result unless pains are taken to prevent it. Such selection will also afford a chance of not only maintaining, but improving the quality. The same care must be taken to secure any other point, as size, excellence of flavor, productiveness, &c. Always take the best.

There are some seeds which farmers pay considerable sums for, which they might as well raise for themselves. We do not allude to corn, wheat, &c., which should not only be home raised, but which should be as carefully selected for improvement as garden seeds, but to smaller seeds, such as carrots for example. These may be had of excellent quality by setting out the finest roots, and saving the finest central bunches of seeds. Parsnip seeds are easily raised, and the field crop is valuable.

The seed of all crops, when ripe, and before they begin to scatter, should be cut, tied in neat bundles, distinctly marked, the name and date, and placed in a dry apartment. When quite dry they should be threshed or shelled, and neatly put up in cotton or paper bags, and placed beyond the reach of depredators.

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[For the Country Gentleman and Cultivator.]

DOMESTIC WINES.

Messrs. Luther Tucker & Son—In looking over your last number, I notice a case or inquiry for directions about making currant wine.

I have heretofore paid considerable attention to the preparation of wines, liquors, syrups, &c., and have seldom missed a season without preparing more or less of these articles.

A good wine for home use, and what I esteem a grateful and harmless beverage, can be made from most, if not from all of our domestic fruits.

The "Bath Champaigne," which gained considerable notoriety in England, was made from the Rhubarb or common pie plant.

The most convenient rule to follow in making wine from currants, cherries, blackberries, &c., is to allow 15 lbs. of the ripe fruit and 15 lbs. of sugar, to make 5 gallons of wine. Weigh the fruit and put it in a tub; pour in a little water and jam with the end of a stick to a pummice; then strain or press the juice entirely out. Now add the sugar to the juice, stirring until dissolved, and then add water enough to make the whole measure 5 gallons.

If brown sugar is used, the raw West India is the best.

Pure soft water should be used, or the mixture may be heated and skimmed, then allowed to cool and poured off free from sediment. About half a gallon of water should be added extra, while heating.

The wine should be put into none but a very clean keg or barrel, and of a size that can be filled nearly full. Set in a cool place with the bung out until it is done working, when the bung should be put in tight, and allowed to stand six months; it may then be bottled for use.

At this point it may be very much improved in body and flavor by adding the following: Put into a gallon of pure spirits of brandy proof, 2 pounds of bruised fresh Malaga raisins and about one dozen cloves; let this stand for several days, until the flavor of the raisins is thoroughly extracted, drain it off clear, and add it to the 5 gallons, when it is ready for bottling. In either case, the wine will improve very much by age.
P. C. Ingersoll.
Green Point, L. I., June 28. Firm of Ingersoll & Dougherty.

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[For the Country Gentleman and Cultivator.]

CURRANT WINE.

To make currant wine of first quality, and that which *will not sour*, it is essential that the currants should be picked in a clear, dry day, and when *fully ripe*, but not over ripe. If over ripe, they are usually shrivelled a little, and are then unfit for first quality wine. The juice should be expressed from them as soon as possible after gathering, and before fermentation commences, which may occur in one or two days after they have been picked in warm weather. In a small way they may be crushed with the hands, or bruised in a tub and the juice expressed in a coarse cloth by squeezing with the hands. On a larger scale they may be crushed in a small portable cider mill, and the juice extracted in a press.

To every gallon of the juice add two gallons of clear soft water, and to every gallon of this mixture add four pounds of coffee crushed sugar. Put this mixture, after the sugar is thoroughly dissolved, into a clean keg or cask, according to the quantity you have, and fill up so the liquid comes up even with the top of the bunghole; this is to allow the scum and impurities thrown to the surface during the process of fermentation to escape. You must manage to have left over a little of the mixture, perhaps a quart will answer, for the purpose of filling up the vessel three or four times a day, as it gradually loses in quantity by the process of ejection at the bunghole, and evaporation. Let the fermentation continue about the period before named, then close up the cask before the fermentation has entirely ceased, but after the most violent stages of it have passed by. This can be ascertained by placing the ear to the bunghole, and listening to the singing of the effervescence and noting its gradually diminishing action and force. On closing, drive in the bung tight, and let it remain at rest until the February or March following, when, if it is perfectly fine and transparent, it may be drawn off and bottled. If it is not fine, it may be made so by adding to every gallon of the liquor ¼ ounce of sulphite of lime. Draw a quart or so of the liquor and dissolve the sulphite, and return the same to the cask, and mix thoroughly by stirring and shaking. In the course of one or two months it will become perfectly fine and bright. When, however, everything works favorably no fining is required.

After the foregoing recipe we have succeeded in producing a wine much approved and admired by all who have partaken of it; the only objection made was in being a little *too sweet*, but this will, in a measure, wear off by age.

Elderberry Wine.

The berries, when ripe, are picked by the stems, then stripped with the hands, or trimmed with shears. Next they are mashed fine, which can be done by means of a pounder, similar to those used for pounding clothes. Let them remain until the next day when the juice is pressed out in a cheese press, or any other convenient way. Next, boil the juice twenty minutes; skim it, and add four pounds of sugar to the gallon. When milk warm add a small piece of bread crust that has been dipped in yeast. Let it stand three days, remove the crust, and the wine is ready for bottling. Age improves it. Some add spices to the liquor when boiled. This is a great favorite with the English.
C. N. Bement.

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Recipe for Currant Jelly.

The following recipe is furnished for the Country Gentleman by Mrs. J. L. D. of Pennsylvania. It will be seen that the manner adopted is exceedingly easy and expeditious; and, from personal trial of the jelly made according to these directions, we can testify that nothing was wanting either to the eye or taste, to render it beautiful and excellent:

One pound white sugar to one pint currant juice. *Boil* the juice by itself for *five minutes; meantime* heat the sugar hot in the oven, then add the sugar to the juice, and let them boil together *one minute*, and the process is accomplished.

[For the Country Gentleman and Cultivator.]

Clover, Gypsum and a Timothy Sod for Wheat.

Messrs. Eds.—A few months since there was some discussion in the Co. Gent. upon the clover and gypsum question, as also upon growing wheat upon an inverted timothy sod. I took some part in the discussion of the above named subjects, in consequence of which I have received several letters in reference to them.

From one, written by an intelligent planter of Maryland, received a few weeks since, I make the following extract, in which he says—"I have read with much edification your communications in the Co. Gent., upon the subject of "*Clover and Gypsum as a manure.*" As a means of sustaining and improving the lands in our section, these articles have been for a long time very generally resorted to, and I had supposed every agricultural community were fully aware of their importance. A long continued and free use of gypsum on some soils, however, may, I am induced to believe, be productive of injurious results to the grain, producing *rust*, and possibly other diseases therein. Such is the belief and experience in some sections of our county; consequently it is now more sparingly and cautiously used than heretofore. On our limestone lands its beneficial effects have been but slight, while on our slate and gravelly lands, (the latter now our best wheat lands,) its good effects have been particularly marked. It was this with clover, that brought these lands to their present position of productiveness, and now they have a sufficiency of that in which they were before deficient; any additional quantity proves injurious, upon the principle, I suppose, that 'too much of a good thing cloys.'

"On our light lands, (red slate or shale, for instance,) we do not experience the same beneficial effects from the use of clover as a manure, as is exhibited on our stiff, heavy clay lands. On the latter we find clover to act like a charm—having the effect, in addition to its fertilizing properties of loosening and lightening the soil—and gypsum a powerful stimulant to the growth of clover. On the former we find that clover has a tendency to lighten a soil now already too light—causing the clover and grain to freeze out during the winter, and the land, where hilly, to wash, and therefore a good crop of wheat seldom follows the turning down of a crop of clover. Wheat on a *timothy sod* is much preferred, and produces a more certain crop, the sod having a tendency to stiffen the soil and prevent its freezing and washing."

Remarks.—Clover and gypsum have been successfully used by the farmers of Onondaga and other counties of New-York, for sixty or more years, for the purpose of keeping up the fertility of their soils, and this too, apparently, without producing any injurious effects upon the soil or crops.

But the same favorable results might not follow in some other localities, and on differently constituted soils. In some places the land becomes "clover-sick"—and will only grow clover after the intervention of other crops, and manuring, for perhaps ten years. The reason of this, in England, does not appear to be fully understood; but here, our farmers know nothing of clover-sick land. Perhaps from frequent and liberal applications of gypsum, some soils may become "plaster-sick," and this may "be productive of injurious results to the grain—producing rust, and possibly other diseases therein," as suggested by the writer quoted from. Some ten or more important mineral ingredients are necessary in a soil, to constitute a fertile one. The application of gypsum adds to a soil sulphur and lime, but no phosphoric acid, potash, soda, &c., though the action, in part, of gypsum may be to render some of the above-named ingredients naturally in the soil, soluble. But long experience has taught the great fact, hat as a general rule, for the most successful farming, at rotation of crops is necessary, and doubtless a rotation of *manures* is advantageous. The long continued use of either plaster, ashes, lime, guano, superphosphate, &c., upon the same soil, is generally supposed to hasten sterility, and they cannot in general be depended upon for continuously maintaining the fertility of the soil. Says Prof. S. W. Johnson, "The great practical lessons taught by experience and confirmed by science, relative to the use of manures, are, *save all refuse which contains any of the elements of vegetation; apply abundantly the mixed ingredients of the dung and compost heap.*"

The farmer who pursues the above recommended course will have little occasion to expend largely of his money for high priced, commercial manures, and if he does purchase such, if rightly applied with the more bulky manures of the farm, in conjunction with a judicious rotation of crops, he need not fear the speedy exhaustion of his soil or his purse.

Upon the "stiff clay lands of Maryland," we have no doubt the clover and gypsum system of manuring, "acts like a charm,"—and will elsewhere, on similar soils—but to make the most of such heavy soils, *thorough drainage is necessary.*

We have found winter wheat to succeed well on a timothy sod, much better than that following hoed crops. Some of our farmers have grown good crops of winter wheat on "gravelly lands," obtaining 20 or more bushels per acre. To obtain good crops on these light open soils, requires heavier manuring than the more loamy and naturally fertile lands. The gravelly soils being naturally drained, the plants usually suffer little by the "freezing and thawings" of spring, compared with the plants on heavier and wetter lands; and as the grain matures earlier, it is less liable to injury from the midge, rust, &c.

Much discussion was had in the Co. Gent. some two years since, in reference to early maturing of wheat, to effect this desirable object for the purpose of escaping the ravages of the midge, rust, &c. Some writers contended that the farmer should obtain his seed wheat far south of his location, because the southern wheat, ripening several weeks earlier at the south, it would also retain its early maturing habits, when far removed to the north. Others contended, the farmer should go north for seed wheat, if he wished to hasten its time of ripening—the principle being the same as that in the case of corn. I do not recollect which party came off "second best" in the discussion.

My impression, at the time, was, and I so stated, that the earlier or later maturing of a variety of wheat, did not so much depend upon the latitude in which it had been grown, as upon an inherent principle of early maturing in the particular wheat itself, upon the same principle that we have early and late maturing varieties of apples, pears, corn, potatoes, &c.

Mr. Killgore's "Early May wheat" was ready for harvesting from 15 to 20 days earlier than other varieties grown in the same neighborhood—and doubtless about the same difference in ripening would have exhibited itself had the several kinds been brought from Kentucky and sown on Mr. Johnston's farm in western New York. Some persons I think started the theory that if the "Early May" was actually an earlier variety than that of any of the sorts grown in western N. Y., it would after a few years culture, conform its habits to the latitude in which it was successively grown for a number of years, each year growing later. It may be so, but there is an old saying, "What's bred in the bone, stays long in the flesh." I know that if a variety of wheat possesses the inherent quality of early maturing, six years consecutive culture of that variety on the same farm, has not yet made it a single day later in "heading out"—it being from eight to ten days earlier than any other varieties I have experimented with, and those are not a few. The variety alluded to, is the early Japan. I am sorry to say, it has not succeeded well with me, but it has not been injured by midge or rust, but the two past winters it has been winter killed, to the amount of one-half, while other varieties have suffered but little. But from the fact that for the past four years, the earliest heads have appeared by the first day of June, seems to clearly prove that this Japan wheat, has lost none of its early maturing habit by being cultivated in the Granite State. It is now June 6th, mostly headed. It will be several days before any other of my varieties will show the first head. Rainy, cold and backward weather with us seems favorable to none of our crops, except winter wheat and grass, which now promise abundant crops. I understand that there is much failure in the corn planted. The seed having failed to germinate in consequence of the corn failing to ripen well last autumn, and not being properly cared for and dried. Experience is said to be a good teacher, but it sometimes proves rather an expensive one.

Warner, N. H., June 6, 1861. L. BARTLETT.

[For the Country Gentleman and Cultivator.]

FARMING AS A BUSINESS.

Messrs. Editors—On page 80 and 109, of Co. Gent. vol. 17, I find the question—"Will a young, industrious man, with from $5000 to $6000, make more money by buying a farm, or letting his money to interest." I can plainly see that this question is rather ambiguous, and does not properly require a definite answer until some qualifications are applied. For instance, a young man may be a foreigner, a merchant, or a novice in the art of farming; such I shall leave out of the question, and apply to only such as are acquainted with farming by experience.

I start with the assertion that what has been done can be done again Twelve years ago I purchased a farm of 112 acres in the county of Genesee, on which I farmed it 4 years; then sold and bought one of 140 acres agreeing to pay for the same the sum of $9,900, upon which I now reside; and I am happy to state that the debt is so nearly cancelled that by selling off some surplus stock, grain, &c., my farm would be clear from all indebtedness and some to spare.

You may ask the capital invested by me in the start. I will tell you $500, and a pair of willing and determined hands, with a *wife*, at the age of 22 years. Some may say that luck has attended me. Very well, so it has; but bad as well as good luck has been a constant intruder; but the motto has always been, come boys, with the calculation of my own.

How would it have been if I had worked for wages, say $150 per year and board, which is about the top price that has been paid on an average for the last 12 years. I can plainly see that I might to-day be working with no other prospect but working still by the month. Talk of working by the month to pay for a farm; 'tis nonsense. As for taking land to the shares, I am of the opinion that could good land be got in that way, something might be made, but nine-tenths of the farms thus obtained are so poor and exhausted that the owners cannot live to the *wholes*. Good farms are not let in this section.

There is a class of young men that will not farm it for the reason that it is a little too much like work, and if one of them had $5,000 in cash, would soon put that to the *shares*, by *sharing* with *livery owners*, *ball-room company*, and waste of time and *principle* would be *his interest* laid up.

I can only think that an industrious and energetic man, (and if you will put in calculator all the better,) with $5,000 to start with, is on the high road to wealth, provided that he be a good manager in farm affairs. What I call a good manager is one that will make his capital pay at least ten per cent profit. I don't call myself the best of managers by any means, but you can figure what the interest would be on my capital of $500 for 12 years, and also the amount to the present time. It would at 7 per cent be about $1200, and I must also say that my time would no more than have supported my family at month work or shares. That don't sound like 10 or 12 thousand to my ears. With your permission I may give you some of my experience with crops, &c., in future.

I think there is a great lack of judgment in selecting farms that *produce* well—a greater want than in most any other one thing.

No one will deny that a young man will be stimulated to action and duty by having a debt before him of a reasonable amount. Some will, to be sure, through good calculation, be able to carry through heavier debts than others; but this does not prove that none others are capable of making cash pay 7 per cent—not by any means. I certainly can cite instances where young men have invested capital and made it pay 20 per cent, but these are rare—in farming I mean.

Finally and fully do I believe that most young men had better own their own land, even if they have to go west and take government land, for I do not think with Acer that tis better to "work for wages or to the shares," than to "own our farm."

There are other considerations why a young man should own or purchase a farm, one of which I will name, *the security of money invested in real estate;* and where do you find *security* in any thing else? More facts I have in store for those that want them. G.

Orleans Co. N. Y.

MARKET PEARS.

John Morse of Cayuga Bridge, who has extensive pear orchards coming into bearing, and who has had experience on a more moderate scale in marketing pears, and in making trials of different varieties, recently informed us, when at a visit at his place, that he placed the *Bartlett* at the head of all as a market variety, which accords with the experience of many others. Next to the Bartlett he ranks the *Doyenne Boussock*, a fine pear and a fine bearer, and one that is never subject to the scab and cracking—a malady usually fatal in his orchards, and which has sometimes ruined many otherwise fine varieties. He has retopped many trees with the Bartlett and Boussock. Next to the latter he ranks the *Flemish Beauty*. These three stand above all the rest. The Seckel and Winter Nelis would be very valuable, but for their small size and unshowy appearance. He has not tried the Sheldon and Lawrence, which we think will yet hold a high rank among market sorts.

Experiment in the Culture of Potatoes.

The following method was adopted, to save the labor of covering the seed by hand, and of hoeing the first crop of weeds. The land was plowed and harrowed, and had become fine and mellow. It was furrowed out one way with a one-horse plow, the potatoes dropped in the furrows, and then covered with the plow, leaving a ridge several inches high, over them. As it is nearly impossible to cover them thus at the right depth, some portions being too deep and others too shallow, the whole was buried deeper than they were intended to remain. In about two weeks, when the shoots had grown three or four inches long, and would be about at the top of the ground at common depths, the whole surface was harrowed lengthwise. The earth of the ridges was thrown down to a level, or filled the furrows between the rows; and the new shoots were about at the new surface. It is now about two weeks since the harrowing was performed; the plants are four to six inches high, and the surface is smooth, mellow and clean. Potatoes alongside, having been planted in the usual way, and the surface having not been disturbed since they were planted, are now, at the first hoeing, infested with a crop of weeds, nearly as high as themselves. The new mode has two important advantages;—the covering is done expeditiously with a plow instead of slowly by hand; and the first hoeing and cultivating, or smoothing the surface with the two-horse harrow—is done at less than one-tenth of the usual labor of cultivating with a horse and hoeing by hand. It is quite essential, however, that the land should be mellow and free from large clods.

Present Condition of American Agriculture.

☞ The extension and diffusion of general information, now-a-days, often leads to mistaken opinions on the part of those who do not penetrate very deeply below the surface of affairs. It is not uncommon, for example, to hear some classes of accidents or crimes spoken of as taking place much more frequently than in former times; and this simply because of the greater publicity which every event, however unimportant, is now almost sure to receive in the columns of our newspapers. For the same reason American morals are frequently compared in a most disparaging way, with those of other nations—a comparison based solely upon the fact that we expose to view, and make a "nine day's wonder" of incidents or misdeeds which elsewhere are entirely disregarded by the public at large, or easily kept from any publicity they might otherwise attain by the influence of interested parties.

The condition of Agriculture in the United States at this time, has been very greatly misrepresented, as compared with past years—and, to some extent, as compared with other countries—partially at least in the undiscriminating way above referred to. Take this State for example: The Census of 1855 was the *first attempt ever made* to obtain the average production per acre of the different staple crops; it became noised abroad that our crop of winter wheat was only ten or eleven bushels per acre, and writers began to draw the most dismal pictures of the exhaustion of our wheat soils, and the impending ruin of our farmers. There was nothing, however, to show that the average yield of the State *in any season of similarly disastrous drouth* had ever been larger; indeed, there was nothing to show *what the average yield had been* in favorable years. It is frequently the case that old farmers mention wonderful instances of production as having taken place in their youth, until they and others begin to speak of large crops having been then much *more frequent* than they are now. They do not form any opinion, however, as to the *average* over large surfaces or successive periods of years, when the farming of the State was new, and at this time; or, if they are sufficiently observant to have done so, we have uniformly found, by careful inquiry for several years past, wherever and whenever the opportunity was afforded, the opinion expressed that the *productiveness of the State has been constantly on the increase*, and that, with rare exceptions, the same thing may be said with truth, of every county and town by itself. It is true that some of our new lands when first broken up, have produced single crops of wheat which have never been subsequently exceeded; it is true that lands which proved particularly suitable for some one crop, have often been kept under that crop year after year, in a suicidal way, until it could no longer be advantageously produced; it is true, in fact, that we have sadly neglected many of the simplest dictates of reason in our Farming—but it must be remembered that all these facts and faults *are now brought into a stronger light than ever before*, and while we offer no defence for those sins whereof we are manifestly guilty, we do claim that our error has been—not in constantly growing worse and worse than our fathers, but simply in improving so little upon the example they set before us.

We not only protest, therefore, against all those misrepresentations which allude to large "average crops" in years gone by, and immensely reduced "averages" now, as being entirely without foundation upon any reliable statistics,—but also as having been largely used by interested pretenders to create a demand for their services in analysing soils or making up prescriptions for the farmer and his land. The history of our Agriculture, if it points to one lesson more plainly than another, indicates we believe the entire possibility and the certain profitableness of *keeping up and increasing the fertility of the land mainly from the farmer's home resources;* and we could scarcely complain so strongly of efforts to place the farmer of our day in a more disadvantageous light than he is really entitled to, if they were animated by a really honest desire to promote his greater prosperity in the future.

Another point often alluded to as showing the "decay of farming" among us, is the comparative decrease, or non-advancement, in the population of our rural districts in the older States, while the cities exhibit a steady and healthy progress. Here again there are two important considerations overlooked: In the first place, we can with difficulty estimate the number of those whose absence from farm-labor is fully made up to us in various ways—by the immense numbers of reapers and mowers we now employ, by the use of machinery in thrashing and the substitution of cultivators instead of the hand-hoe, and by the vast saving in the time required to market the products of the farm when it is done by railroad or steamboat, instead of teaming them a score or two of miles over heavy wagon roads, and spending perhaps a week to do what a letter will to-day accomplish by "return of mail." In the second place, there are many drawn away from the rural districts, who when there never belonged strictly to the *farming population* of the country; the railroads and other influences are constantly centralizing many kinds of industry in the cities which were formerly carried on to better advantage in villages, or indeed at every cross-road. The implements of the farm, from the plow all the way through the list, formerly were made singly by scattered smiths and mechanics, instead of by the wholesale in huge factories; the clothing of the farmer, from his hat to his boots, was more generally cut and put together, if not its very materials manufactured, almost at his door, instead of coming ready-made from distant cities and towns; in fine, access to the great marts has been rendered so easy that much of the trading even has left the villages for more central and important points. In all these ways, the cities have gained at the expense of the *country*—not at the expense of the *farm;* while the farmers have gained all the time in increased consumption and better manufactures at lower prices—and they have more than held their own at the East, we fully believe, against a competition from the West, which at any former period in their history would have been perhaps overwhelmingly ruinous.

These remarks have been suggested by a recent article in the Mark Lane Express, so full of misstatements as to the "alarming decrease" in our production of wheat, and the "large tracts of land" which are here "annually becoming unproductive and going out of tillage and into the wild," that we could not well notice them each by itself, and have therefore alluded to some of the errors which uniformly lie at the bottom of such misstatements. What, for example, can be farther from the truth than the following:—

> Even in New-York State the falling off is very great. Lands that produced a few years back 25 bushels per acre, now barely average 5. In Albany district, lands that formerly yielded from 30 to 40 bushels have sunk to 7½ bushels, and in some counties to five and six.(!!!)

Various statistics are taken to support these statements; those which alone can be regarded as possessing any importance are the Census returns referred to as proving, not only that our exports of breadstuffs *decline* instead of advancing, but also that our ability to supply breadstuffs *in the future cannot be depended upon!* How exceedingly unjust it is to attempt the support of such an argument by census returns taken every *tenth year*, and quite as likely as not to represent very unfairly the nine that preceded it, will be apparent to any thinking man; but the fallacy of the whole is most clearly proven, beyond the shadow of a doubt, the moment we refer to the official returns of our exports as given *year by year*, instead of at intervals of ten years. We have before us as we write these official returns for thirty years, from 1826 to 1855 inclusive, showing the money value of our exports of breadstuffs and provisions for each year by itself; and we have taken pains to ascertain the average for each of the three decades, as follows:—

VALUE OF EXPORTS OF BREADSTUFFS AND PROVISIONS FROM THE UNITED STATES TO OTHER COUNTRIES.

Average for each year from		1826 to 1835, ...	$12,736,296
do.	do.	1836 to 1845, ...	14,307,111
do.	do.	1846 to 1855, ...	38,376,034

Our Agriculture has therefore, in reality, constantly produced, with each succeeding cycle of years, a larger and larger surplus for foreign markets; there can be no doubt that the ten years to be included from 1856 to 1865 will show an increase upon the preceding ten, perhaps even more remarkable than is shown from 1846 to 1855 as compared with the previous decade,—when it will be noticed that the value of our exports of breadstuffs suddenly arose to be almost *three times* its previous average. As to the future, our contemporary need have no apprehensions whatever; the capacity of the country for production, and the increase of its production under a favorable demand abroad, are almost inconceivably great, and we have no fear at present of any privateering force that shall prevent our sending our Breadstuffs in our own ships to any foreign port where we can get a fair price for them.

DESTROYING INSECTS.

We must never expect to be free from the annoyance of insects in the garden, nor of weeds among the plants. But as weeds may be destroyed and prevented from seeding, so insects may be killed and their increase avoided. The soil may be nearly freed from the seeds of weeds, and but little labor be expended in eradicating them; and assiduous care will greatly thin the ranks of insects, and lessen the labor in future. As a general rule, those remedies which consist in *killing* are good; those which merely *repel* are inefficient. As an example, the jarring and killing process for the Curculio, is entirely effectual as far as it goes, as well as the pig and poultry remedy. But fumigations, foul odors, washes, &c., are of little use. We have tried the various prescribed remedies for the squash and cucumber bugs, such as tobacco, ashes, plaster, and various odors, but as yet nothing has been found that will compare in promptness and certainty to a boy with a quick eye and quick fingers, who passes the rounds among them three times a day. Birds should be protected and encouraged, so far as they devour insects, and it is well enough to shoot one occasionally for the purpose of examining its crop, and a little experience of this kind will soon determine which are our friends, like the tribe of fly-catchers, whose crops will probably be found filled with these depredators, and which our enemies, as the cedar or cherry bird, whose crops will contain cherries and other fruits. It is not best to take everything on trust, as many errors are thus received and perpetuated.

GROWTH OF STANDARD PEARS.

A reason that so few of these eminently profitable trees are set out is the time required to bring them into bearing, as they are commonly managed. "He who plants pears, plants for his heirs," applies to those who give them the privileges and treatment of fence posts. In order to show that the tardy progress is not essential and inseparable from pear planting, we have just measured the young trees growing on the grounds of Dr. Farley of Union Springs, who says he does not wish his trees to live and grow if he does not take care of them. Young standard pears of leading varieties, set out two years ago, when two years old, and now making their third summer's growth since transplanting, average an inch and a half to an inch and three-fourths in diameter, and seven to eight feet high. Trees set four years ago, and now making their fifth year's growth, are beautiful in form, and two and three-fourths to three inches in diameter, and nine to ten feet high. The pear crop being a general failure this year, they do not bear; but in any good season, we do not see why trees of this size would not bear a half bushel or more each, with the prospect of a yearly increase.

We lately examined an orchard in another place, enveloped in grass, planted more than twice as long ago, the trees of which were no larger. It had been cultivated a part of the time. With the neglect, first and last, that trees usually receive, it would probably require fifteen or twenty years to attain the size of these five year trees of Dr. Farley's plantation.

SENDING BUDS BY MAIL.

Since the postage law has been amended, so as to allow the transmission of buds and grafts by mail at a cheap rate, many more than formerly will now probably be forwarded in this way. The question is often asked, "How far can you send buds safely by mail?" The answer must depend greatly on circumstances. If cut and put up quite early in summer, while in a green, growing and succulent state, they will scarcely keep in good condition more than a day or two. If, on the other hand, the shoots are well ripened and hardened, they may be kept a week, or even a fortnight. There are some kinds of trees which cease growing by mid-summer, form their terminal buds, and ripen their wood; and on a high, dry, and hard soil, not cultivated, some trees will have matured shoots a month or two sooner than the same kinds on richer and more highly cultivated grounds. From such early ripening trees, the buds may be cut and sent soon.

There are two ways of putting them up—one in oil-silk cases, made by making a water-tight covering of the oil-silk, by wrapping it around the sides and ends, and closing every crack by passing fine thread many times around, until no moisture can escape from within. They cannot therefore dry, and they remain fresh and plump. If dipped in water just before wrapping up, there will be about enough moisture to spare, to saturate the air within. Without this precaution some moisture will escape to the confined air, and the shoots may become slightly shrivelled. Not more than a dozen shoots should be placed within each oil-silk case, as a larger number cannot be securely wrapped. Any number of these cases may be placed in one package, not exceeding eight ounces, and sent by mail for one cent per ounce under 1,500 miles, and two cents, over that distance.

The other mode of packing, is in damp moss, a safer mode, but more expensive, as the moss in which they are imbedded should weigh nearly as much as the shoots. The best mode of all, is to fill all the interstices of the shoots with finely pulverized damp moss, and then encase the whole in thin oil-cloth. The moss retains the moisture, and protects the shoots from bruising, and the oil-cloth prevents the exterior portions from drying.

[For the Country Gentleman and Cultivator.]

To Cure Lice on Calves.

I have used flour brimstone, (sulphur,) rubbing it dry well into the roots of the hair all along the back. The lice will then move to the inside of the flanks and behind the shoulders, where the same remedy may be applied, mixing a little lard with it to make it adhere where it would otherwise fall off. The calves may lick themselves as much as they please; as sulphur is a good alterative, it will prove beneficial. N. B.—I have noticed that every winter that I allowed fowls to roost in the stables, not only my calves but the larger cattle got lousy. Rusticus.

[For the Country Gentleman and Cultivator.]

Growing Clover Seed.

I have observed in years past, where clover seed is raised pretty extensively, that many farmers fail to get more than half a crop of seed, and sometimes not even a fourth of a crop, simply because they allow the first crop of clover, which is usually cut for hay, to stand too long before it is cut. (I allude particularly to the early clover.)

In some instances the clover is fed off by stock of some kind until about the middle of June; but, as a general rule, no cattle are allowed to graze in the field in the former part of the season, but the grass is mowed for hay, and the second growth produces the seed.

Now, the idea is to cut the first growth of grass for hay, at that period in the stage of its growth, when the second growth will produce the greatest amount of seed per acre.

Clover (*Trifolium pratense*) will produce only one crop of seed in a season. Now, if we allow it to grow until it has blossomed, and then permit it to stand until the seed begins to form, or until the seed *has* formed, and some of the blossoms begin to turn brown, we cannot reasonably expect to have much of a crop of seed, the next time the clover is cut. Why? Simply because the energies of the plant, for the present season, and the seed-producing substances have been too much exhausted to mature another crop the same season. Therefore, when clover is allowed to stand until all the blossoms have become fully developed, a portion of them will have begun to change their color, and to mature their seed; and all the seed that is formed and partially matured in the first crop of clover, will be the means of diminishing just so much the amount of seed of the second crop.

This will explain the mystery to some farmers, why they sometimes get barely enough clover seed per acre, to pay the expense of getting it out, even when there is a heavy burden of straw, and an abundance of large heads. There is usually too much anxiety to get a good crop of hay, and afterwards, a crop of seed. But it is better to be contented with *less* hay in the first crop, and have more seed in the second crop, than to lose a dollar's worth of seed for a dime's worth of hay.

These considerations teach us the importance of cutting clover in good time, when the second crop is designed for a crop of seed. There is not much danger of cutting it too early, but there *is great danger* of allowing it to stand so long, that the second crop will be all straw and heads, and little or no seed.

I believe when clover is pastured off in June, instead of being mowed—which is the practice of many farmers—that the same ground will produce and *does* produce much more seed per acre, than when the first growth is mowed. I know this has been true in seasons past, on my own farm, and also on adjoining farms, so far as I have made observations on this subject. Allowing the first crop of clover to stand only a few days too long, will make a vast difference in the amount of seed per acre of the second crop.

Three years ago, I had two pieces of clover as nearly equal in every respect, as we could perceive; and one piece was cut for hay before all the heads were in blossom, and before any of them began to turn brown; and the other was allowed to stand five days longer, before it was cut. In the fall, when we came to cut the clover again for seed, it was about as good in one piece as in the other, so far as large heads and stalks were concerned. But, when we came to examine the heads for seed, we found, that the heads of the first piece were well filled, while those of the piece which was mowed after some of the first crop of heads began to turn brown, had not seed enough in them to pay the expense of getting it out, and therefore, we simply made hay of it.

This lesson taught me the importance of cutting the first growth of clover before it has fully blossomed out, when the object is a crop of seed in the second growth. It will be green as the very grass, and succulent as green buckwheat straw; but we will be sure to get more seed in the next crop, by cutting it thus green, than if it is allowed to stand longer.

Saving Timothy Seed.

Every farmer who would keep his farm free from foul weeds, such as daisies, fleabane, and such like noxious weeds, must raise his own grass seed. There is, no doubt, much pure timothy seed carried to market for sale; but, as a general rule, the greater part of it has more or less seed of noxious weeds in it. I am acquainted with many farmers who almost always allow their grass to stand until it is dead ripe, before it is cut, so that they can save all the seed, and such farmers usually have a vast amount of the seed of noxious weeds in their timothy seed. Of course this is mingled with good seed at the market, and the whole of it is sold for pure seed.

My own practice in saving timothy seed may, perhaps, be of some little benefit to those who may be at a loss to know how to perform this job with the greatest facility and dispatch. July is the best time to attend to this job.

I select an acre or two, where the timothy is the best and tallest, and where the heads are longest, and if there are any noxious weeds, improve some leisure hours in pulling or cutting them all out. When we come to cut it, if a single weed has escaped notice, let it be taken out at that time. Allow the seed to stand until about two thirds of the heads have turned to a brown color.

The usual practice is to let timothy stand until it is dead ripe, and will nearly half shell out when it is being harvested. Of course, when it is allowed to stand so long, the leaves and stalks are all dried up, and are nearly worthless for fodder. But when the heads have simply turned brown, the feed is fully matured; and if it is cut then, but little of it will be lost by shelling, and the stalks and leaves will make, sometimes, tolerable good fodder, especially if it is run through a straw-cutter.

The Way to Harvest Timothy Seed.

I have been accustomed to practice several different ways of gathering timothy seed, being influenced by circumstances.

If the timothy was very tall, and not too heavy, we cut it with a grain-cradle, cutting it as high as practicable, after which it was raked and bound, and set up in long shocks, and allowed to cure about three or four days—according to the state of the weather—when it was hauled to the barn. The stubble was then cut close to the ground for hay. Sometimes when the bottom of the grass was not very thick, we cut it with a machine close to the ground, and leave it in small gavels for a day or two, if the weather was favorable for making hay, when we would turn them over, and stir them up a little, and then bind them, and as they were cured they were hauled to the barn, and not put into a large solid mow, but spread over a large surface, so as not to injure the vitality of the seed.

Another way, which has been my most uniform practice, is, to mow the grass with a scythe, as soon as the seed is ripe enough to be cut, and allow it to remain about one day in the swath, just as it was mowed; and the next day, if the swaths were rather thick and heavy, we would turn them upside down, by running a long fork handle, or a smooth light pole, under the swath near the tops of the grass, and turn it over bodily. Should there be some very thick and green bunches in some places, they should be stirred up, so that the whole would dry out in a day or so if the weather were favorable. As soon as it is cured, we would bind in small bundles, and shock it and allow it to cure for several days, when it may be stacked or put in the barn.

Most farmers allow their seed to remain too long in the field after it is cut. The *seed* is very small when compared with kernels of cereal grains, and consequently does not require as long time to cure. As soon as the straw is well cured, there will be no fears about the seed.

How to Mow Timothy Seed.

When farmers were accustomed to cut all their grass by hand, it would hardly seem necessary to pen anything about handling a grass-scythe; but good mowers, at the present day, are not very numerous among farm-laborers. This is my apology for alluding to this subject in this way.

When we mow timothy grass for seed, it is very desirable to have it all laid evenly and straight, as if it had been cradled, so that we can bind it. In order to do this properly, a man must be not only a good mower, but he must have the knack of fetching his scythe around at every clip in such a manner that his swath will not be tumbled over and over, as it sometimes is when we mow grass for hay. It is almost impossible to give the necessary directions on paper how to do it; but we will try:

In the first place, it is very important to "point in" low. This must be done by dropping the entire scythe, from heel to point, flat on the ground, and keeping the heel down on the ground through the entire clip or sweep of the scythe. Another thing is, the workman must not cut as wide a swath as when mowing grass for hay, and he should "point in" farther forward than when it is not desirable to lay the swath; and as he fetches his scythe around he should give his left hand a sudden jerk when the scythe is near the last part of the clip, and bring his left hand, with the swath, almost behind him, and not raise the *heel* of the scythe while the scythe is cutting. By giving a sudden jerk with the left hand, and keeping the heel down, the butts of the grass will be drawn inwards towards the mower's feet, and if every clip is made with care, and with about the same sweep of the scythe, and with the same amount of force, a mower will soon learn, if he watches closely the manner in which each clip falls, how to fetch his scythe around so as to lay a swath very evenly and straight.

S. EDWARDS TODD.

[For the Country Gentleman and Cultivator.]

THEORY AND ART OF BREAD-MAKING.

Eds. Co. Gent.—In your issue of the 23d of May you have given us a short notice of Prof. Horsford's pamphlet on the Theory and Art of Bread-Making, in which you justly remark that "he has evidently devoted much attention to a very important subject."

A few weeks since I received from Prof. H. a copy, which I have perused with a great deal of interest, because the subject of bread-making and bread eating is one that comes home to the bosoms of all.

The book contains thirty pages, and it would be well if every family could be supplied with a copy, because it contains many important scientific and practical facts relative to the "staff of life," (as some one has termed *bread*,) that there is reason to believe are not generally so well understood as they should be; therefore the importance that all interested in bread-making should make themselves familiar with the contents of the pamphlet by procuring a copy, and making themselves acquainted with the scientific and economical facts there communicated.

With well executed engravings he gives many figures, showing the composition of the wheat grain or kernel, and the actual location or deposit of the important constituents of the kernels of grain, viz., the phosphates, the gluten and starch. From the location of the phosphates in the grain of wheat it appears that most of them are in the bran, and but a mere trace, as it were, in the fine flour. These figures explain why the chemist Mayer found fourteen times as much phosphoric acid in commercial bran as he found in commercial superfine flour; and these figures also show why the bread made from Graham flour (unbolted wheaten meal) is so much more healthy and nutritious than bread made from the best superfine flour. The Graham bread contains *all* the gluten as well as starch of the grain. All the phosphates and nitrogenous compounds of the grain enter into the bread when the bran is not separated from the flour, instead of a small fraction only, as in bread made from superfine flour. But habit, custom and fashion are so strongly fixed, that Graham bread will not soon come into extensive use among our people, however much more healthy, nutritious and economical it may be over bread made from the best superfine flour.

"Of all the salts taking part in vital processes, the most important are the phosphates. They enter into the composition of the bones, the muscles, the nerves, the brain, and indeed of every higher tissue; and whenever an important function is to be performed, there nature has supplied a store of phosphates. Aside from the great prominence now given by the medical world to the use of the various forms of soluble hypophosphites, it is well known that finely prepared phosphate of lime, eaten as such, greatly aids the growth and firmness of bones and teeth. Fractured bones are reunited much more promptly upon a diet into which pulverized bones enters as a prominent constituent.

"Food, otherwise unobjectionable, is frequently deficient in these (phosphatic) ingredients, and the effect of living too exclusively upon such imperfect diet, is conceived to lower the tone and diminish the vigor of the system as a whole. On the other hand, it has been suggested that pioneers and early settlers owe the prominence of the osseous system, and the accompanying hardihood they so uniformly display, in no small degree to the abundant phosphates supplied by the virgin soils to the cereals and meats that constitute their food. This suggestion derives strength from the circumstance that the effeminency of many Oriental nations is the concomitant of a diet which is relatively deficient in phosphates.

"This demand of the system for phosphates is illustrated in the well-known relish of many of the inferior animals for bones. Cattle, grazing in inferior pastures, eat ground and other bones with avidity.

"Bread made from superfine wheat flour is deficient in phosphates." To make up this deficiency of phosphates, is one of the important results of Prof. Horsford's discovery in bread making. "The phosphoric acid is prepared from the only practical source of it, the bones of beef and mutton. They are boiled, then calcined, after which the lime is in a great measure withdrawn by the action of a stronger acid, and the phosphoric acid, as an exceedingly acid phosphate of lime, extracted by leaching. The extract is then concentrated by boiling, and mixed with bi-carbonate of soda, which is bottled in the form of a fine whitish powder, ready for use, with printed directions," &c., &c.

In the pamphlet the Prof. goes into the scientific and practical facts, connected with the several ways of bread-making—but one needs the entire book to understand the subject in all its bearings. I presume any one wishing further information in this matter could obtain a copy of the work, by forwarding to the Professor's address, ten or twelve cents in postage stamps.

Advantages of the New Method.

Among the advantages which the new method of making bread presents, are:

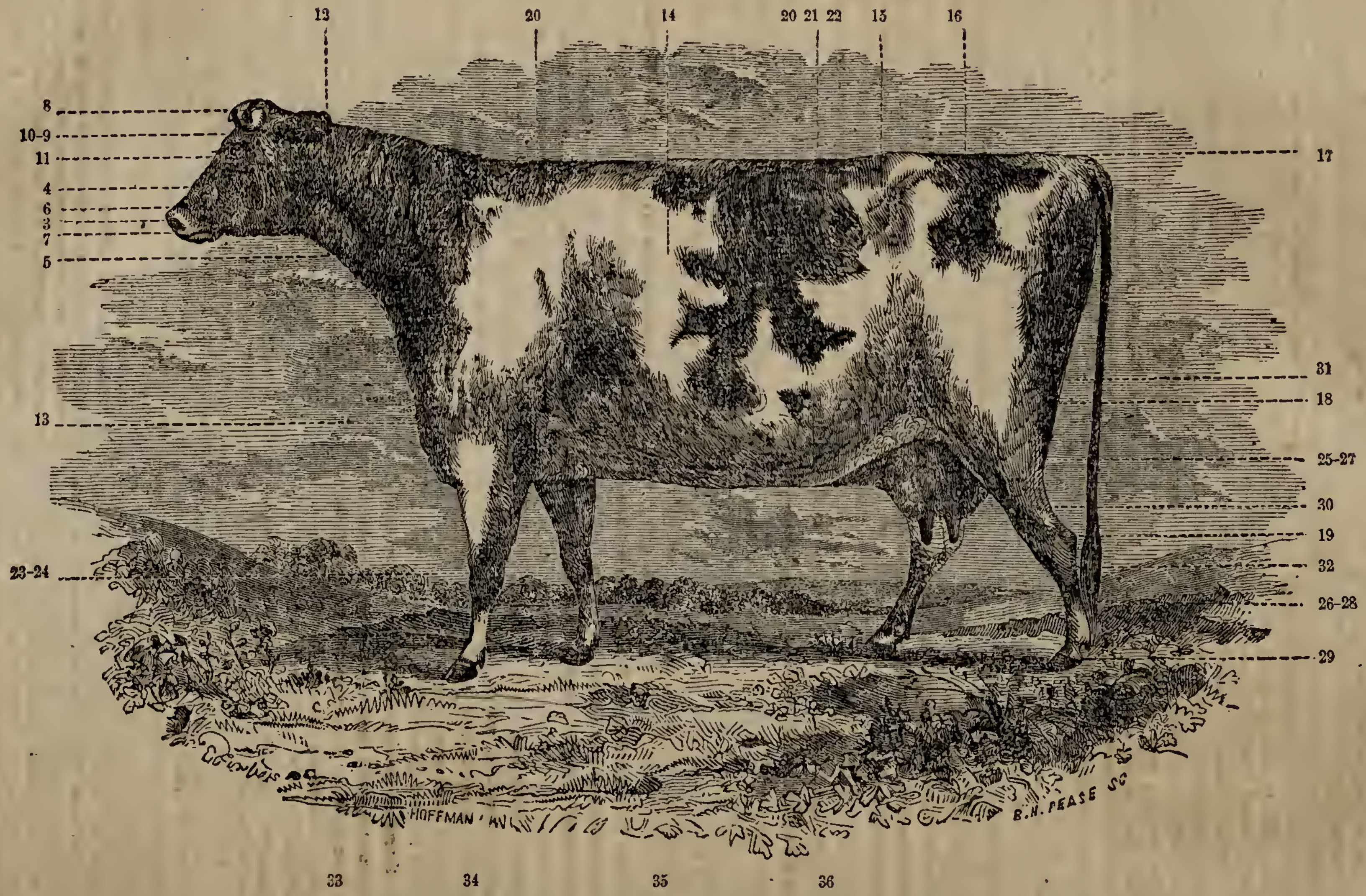
1. Its saving of the nutritious constituents of the flour from consumption in the process of raising the bread.
2. Its restoration of the phosphates, which are in larger or lesser measure removed with the bran in preparation of the finer qualities of flour.
3. Its saving of time; while ordinary fermented bread involves as a general thing, preparation over night, care for several hours before baking, and dependence on a variable supply of leaven or yeast, the phosphatic bread is prepared from the flour for the oven in a few minutes.
4. It secures a uniformly excellent result, while the result with the process of fermentation is of doubtful issue, and in household production is more frequently indifferent than good.
5. It furnishes a bread that retains its moisture much longer than equally porous bread, and does not mould as readily as fermented bread does.
6. It provides a bread, from the use of which even by persons of delicate digestive apparatus, none of the ills peculiar to fermented bread follow. It may be eaten warm with impunity, while with most persons it is necessary that fermented bread should lose its freshness, or become stale, in order to the destruction of some objectionable qualities before it may be eaten with safety.
7. It is a method which, by providing agents of known quality and strength, reduces the measure of skill required to a minimum; and secures, with a very small degree of care and moderate expenditure of time, uniformly excellent bread. The time required for a single person to prepare four loaves of a pound each, does not exceed five minutes, and the baking takes from thirty to forty-five minutes.

Having recently experimented in my family, in bread-making with Prof. Horsford's "yeast powders," we feel assured the preceding statements of this new method of bread-making are not overdrawn, and hope many others will give the method a fair trial.

L. Bartlett.

Warner, New Hampshire.

☞ The Susquehanna Valley Ag. Society holds its Fair at Unadilla (N. Y.,) Sept. 26, 27.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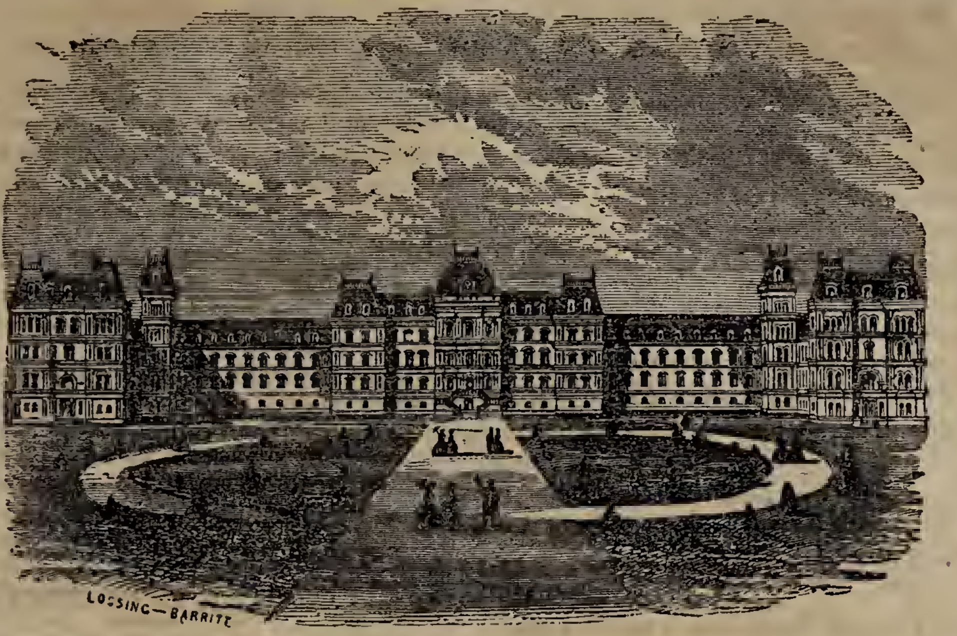
THE PERFECT JERSEY COW.---(See next page.)



THE VASSAR FEMALE COLLEGE.

We have heretofore mentioned in the COUNTRY GENTLEMAN the munificent endowment by MATTHEW VASSAR, Esq., of Poughkeepsie, of an Institution bearing his name, designed, in the language of its charter, "to promote the education of young women in literature, science and the arts." Generously devoting a princely portion of his fortune, over *four hundred thousand dollars*, to the advancement of this design, the first steps toward its organization were taken several months ago, and now the ground has been broken and the contracts entered into for the erection of the College Building.

We are indebted to Mr. Vassar for the foregoing illustration, showing the design adopted for this edifice:

It is to be of brick, with stone trimmings, three stories high, with a Mansard roof. The length of the front, including the wings, is 500 feet. The wings each 56 feet wide—165 deep. Depth of center, 171 feet. It will contain a chapel, library, art gallery, lecture and recitation rooms, the President's house, and two double houses for four Professors, apartments for lady teachers, matrons, and the steward's family, and will accommodate 300 young ladies, each with a separate sleeping room. The building will be heated by steam, lighted with gas, ventilated in the most perfect manner, supplied throughout with an abundance of pure, soft water, and nearly fire proof. The cost of the structure will be about $200,000. The grounds given to the college (200 acres) are about one mile distant from the eastern limits of the city of Poughkeepsie.

The Chairman of the Board of Trustees is Hon. WILLIAM KELLY; and the other members of the Board are gentlemen in whom, like Mr. KELLY, the public will repose the most entire confidence. The President of the College is MILO P. JEWETT, who is to visit, during the current year, several of our Colleges and Universities; and he will, especially, study the systems adopted in the best Female Seminaries of the country, with a view of availing himself of all that is excellent in our most approved institutions.

THE JERSEY COW.

The portrait of a Jersey cow, on preceding page, drawn by Col. LE COUTEUR, was, with the annexed 'Scale of Points,' adopted by the Royal Jersey Agricultural Society as the guide for the judges in awarding premiums on cattle:

SCALE OF POINTS FOR COWS AND HEIFERS.

Article.		Points.
1.	Pedigree on male side,	1
2.	Pedigree on female side,	1
3.	Head—small, fine and tapering,	1
4.	Cheek—small,	1
5.	Throat—clean,	1
6.	Muzzle—fine and encircled with a light color,	1
7.	Nostrils—high and open,	1
8.	Horns—smooth, crumpled, not too thick at the base, and tapering, tipped with black,	1
9.	Ears—small and thin,	1
10.	Ears—of a deep orange color within,	1
11.	Eye—full and placid,	1
12.	Neck—straight, fine, and lightly placed on the shoulders,	1
13.	Chest—broad and deep,	1
14.	Barrel—hooped, broad and deep,	1
15.	Well ribbed home, having but little space between the last rib and the hip,	1
16.	Back—straight from the withers to the top of the hip,	1
17.	Back—straight from the top of the hips to the setting on of the tail, and the tail at right angles with the back,	1
18.	Tail—fine,	1
19.	Tail—hanging down to hocks,	1
20.	Hide—thin and movable, but not too loose,	1
21.	Hide—covered with soft and fine hair,	1
22.	Hide—of a good color,	1
23.	Fore-legs—short, straight and fine,	1
24.	Fore-arm—swelling and full above the knee, and fine below it,	1
25.	Hind quarters—from the hock to the point of the rump long and well filled up,	1
26.	Hind legs—short and straight, (below the hocks,) and bones rather fine,	1
27.	Hind legs—squarely placed, and not too close together when viewed from behind,	1
28.	Hind legs—not to cross in walking,	1
29.	Hoofs—small,	1
30.	Udder—full in form, i. e., well in line with the belly,	1
31.	Udder—well up behind,	1
32.	Teats—large and squarely placed, being wide apart,	1
33.	Milk veins—very prominent,	1
34.	Growth,	1
35.	General appearance,	1
36.	Condition,	1
	Perfection,	36

No prize shall be awarded to cows having less than 29 points.

No prize shall be awarded to heifers having less than 26 points.

Cows having obtained 27 points, and heifers 24 points, without pedigree, shall be allowed to be branded, but cannot take a prize.

Three points, viz.: Nos. 30, 31 and 33, shall be deducted from the number required for perfection in heifers, as the udder and milk veins cannot be fully developed; a heifer will therefore be considered perfect at 33 points.

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☞ Col. LEWIS G. MORRIS, after several years' retirement from the prominent position he so long and ably occupied as an importer and breeder of Improved Stock, is once more able to spare a limited number from his private herd of Short-Horns. An Advertisement of this fact in another part of this paper, will at once attract the attention of Col. M.'s old customers in every part of the country—all of whom may not heretofore have been aware that the Colonel has never wholly given up his favorite pursuit, but, during the period since his final sale, has been devoting no little attention to the management of a "select few,"—the results of which care, we need scarcely say, would not be offered to public notice if they were not such as to do credit to the long and large experience of their owner and breeder.

[For the Country Gentleman and Cultivator.]

"THE CHESTER WHITES."

MESSRS. EDITORS—During the late visit here of your L. H. T., I promised him a few notes upon the history and points of our Chester County Hogs. I had previously given our friend Emery of the "Prairie Farmer," a similar promise, and now take advantage of a leisure hour to redeem these obligations, and will pay you both off with the same "notes."

In this ancient county of ours, for half a century past, the *fancy* of some of our best farmers has run very decidedly in the direction of *fine hogs*—just as JONAS WEBB's inclined to South-Downs, and the Messrs. BATES' to Short-Horns. Our county, too, being largely devoted to dairying, and consequently to feeding pork on a large scale, it has been a matter of great moment to us to find out the most profitable breed of hogs. We think we have it in our "Chester Whites."

I learn from Mr. FRANCIS STRODE, an extensive dairy farmer of this county, who has been many years engaged in raising and sending abroad this particular breed of hogs, that his father, the late Richard Strode, commenced a half century since to pay close attention to improving his stock of hogs, (since persevered in so successfully by his son,) and that by judicious crossings through a series of years, and a careful selection of choice animals to breed from, our Chester hogs have attained their present valuable properties, and established certain unmistakable and characteristic "points" of excellence and recognition. Others of our farmers than the Messrs. Strode have been laboring diligently to the same end these many years past. I merely mention their names as a matter of reference and authority, and as among the earliest growers of this stock. There is little doubt, I think, that our Chester whites have descended from improved foreign stock—the Berkshires,* most probably, from their resemblance in some of their points—and yet we have improved so decidedly upon the Berkshires in many important respects that some of our breeders deny the paternity in toto from that source.

As a matter of course, in the great "Swinish multitude" within our county limits, there are numerous "grades" of these animals *claiming* to be the "Chester Whites," which, though frequently very creditable specimens, are decidedly inferior to the stock of the Messrs. Strode and others of our most careful breeders. It is important, therefore, that persons at a distance, ordering this breed of hogs, should apply to parties of known reliability in the matter.

Among the important characteristics of this breed of hogs, is its remarkable aptitude to fatten at any age, and without being fed on grain. On good pasture, with the ordinary "slops" from the kitchen and dairy, the Chester will at all times keep sleek and fat,—in fact, our farmers frequently have trouble in keeping their breeding sows in sufficiently low condition when running to pasture, with nothing but pure water to drink. With this aptitude to fatten, we claim for the Chesters, *that they will produce more pork upon the same amount of food than any other breed*, consequently, they are more valuable and profitable to the farmer, than any other breed. A genuine Chester, when well cared for, will gain on an average one pound weight per day till two years old, and has been known to reach one thousand lbs. at that age and over. We do not consider it desirable, however, nor is it profitable to attempt to reach this great weight. From 300 lbs. to 400 lbs. weight makes the best pork, and a well fed Chester *is sure* to make this weight at from nine to twelve months old. At eight weeks old—which is the proper age for shipping, and they should never be sent abroad earlier—our shoats measure about thirty inches in length and weigh about fifty lbs.

The following are recognized by our best breeders here as some of the established "points" of this stock:—

FORM.—Head short and broad, face somewhat dished—wide between the eyes and jowls. *Ears* fine and thin, standing well out from the head, and pointing forward, (*never* drooping.) *Neck* short and thick, well set on the shoulders which are prominent and full. *Sides* carrying their full width back to the hams and rounded. *Hams* rounded, swelling out behind and at sides, and presenting a full round appearance on all sides. *Back* straight and broad. (A pig that has low shoulders or sinks in the back, should at once be rejected as a breeder,—it is only fit for the butcher.)

COLOR.—*Clear white* and when well washed presents frequently a silky appearance. (The least *spot*, or approach to a *sandy* color, indicates a "grade" animal.

HAIR.—Soft, thin on the back and belly, more thickly set on the sides, and frequently a little curled.

Bones small and fine. *Tail* fine, tapering and curled.

Chester Co., Penn. A CHESTER COUNTY FARMER.

CLOVER IN ORCHARDS.

Is it true that clover is worse for young trees than other grasses, as is commonly supposed? B.

Clover is probably more detrimental to the growth of trees, young or old, than any other crop. The roots of common grasses extend downwards but a few inches, as every plowman is aware who inverts sward. Consequently, grass is not so injurious to old orchards, where the roots of the trees have extended downwards two or three feet in the subsoil (as ditchers may often have observed,) as to young trees, the roots of which are near the surface. But the roots of clover extend deeply down; our readers may have observed the statement that President GEDDES, at the late meeting of the State Agricultural Board at Watertown, exhibited clover roots that had run down three feet eight inches, and were then broken off. When a crop thus throws its roots through every portion of the soil and subsoil that is occupied by the roots of trees, the result must be many times more injurious to the latter, than when the mere surface is covered. We must not be understood as approving the occupancy of young orchards by crops of grass, which so much checks the growth of the trees, and often proves their destruction.

[For the Country Gentleman and Cultivator.]

Striped Melon-Bug.

I found this insect was destroying most of my Honolulu and Hubbard squashes—20 or 30 of them could be killed on a hill. Early in the morning they are clumsy and were easily destroyed; but before night they appeared in undiminished numbers. It was too late to try the radish or onion remedy. I had a little soot, which did good as far it went, sprinkled about the plants; but on the principal part of the patch I applied sawdust pretty well impregnated with Kerosene oil—say half a pint to a peck of sawdust, and was much pleased with its action. I thought it might be worth noticing, as the knowledge of a variety of remedies is desirable—sometimes one and sometimes another being accessible. S. A. *Yardville, N. J.*

* * *

SEEDING WITH CLOVER AFTER CORN.—The writer has been in the habit for several consecutive seasons, immediately after the last hoeing of corn, (which has been cultivated as level as practicable), of sowing clover seed by going between each row one way, and carefully scattering the seeds under the leaves and stalks at the rate of 15 lbs. to the acre, and usually with good success. The corn seems to shade the seed sufficiently to protect it from the too powerful heat of the sun, and if the land is in good tilth, a good catch is secured for pasturing or plowing under.

Salisbury, Conn. W. J. PETTEE.

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* Our friend Paschall Morris of Philadelphia, traces the Chester County Whites back to the importation of a pair of Bedfordshire pigs—See Co. GENT., vol. xvii, page 268. EDS. CO. GENT.

BUTTER MAKING.

Of all the butter which goes to market from this State, not one-fifth is strictly a prime article, and of that fifth probably a half may be deducted for a not perfectly pure article. Indeed, so limited is the section where the very best butter can be produced, that I doubt whether the estimate is not even now too high.

Over a large portion of the State good butter, for immediate consumption may be and is made, but it will not bear transportation. The best butter is made in Delaware, Sullivan and Greene, upon the brown shales of the Cattskills. The next best is made in Lewis, Broome, Tioga, Chemung, Cortland, Cattaraugus, Steuben, Chautauqua, Jefferson, St. Lawrence, Alleghany, Chenango, Herkimer and Oneida; and in these counties the best comes only from the hilly and mountainous regions which have been longest in pasture. Upon the old and rocky pastures of Putnam, Duchess, Columbia, Rensselaer and Washington, good butter is produced, but as a general thing it will not compare favorably with that from the west side of the Hudson river. Short, sweet herbage, which only grows in perfection upon old pastures in hilly or mountainous regions, pure air, and soft pure water, are the indispensable requisites for pure butter. All these, however, without the skillful manipulations of the dairy woman, will avail nothing.

The dairy woman cannot do her part well if she do not have the advantage of proper fixtures and implements. A good, cool place for setting the milk in summer is absolutely indispensable, and there is no farm where cows can be kept profitably, that such a place cannot be provided at small expense. The use of spring houses is one of the causes for the good butter of the hilly regions. But a good *spring* house can be made near a well, and oftener much more convenient, as being nearer the house than the spring. I saw a very nice one, which answered an admirable pourpose, and is a model of its kind. The ground was excavated about four feet by some twelve feet square, and a solid stone wall two feet thick, laid in cement, four feet high. The floor inside was also laid in cement, slightly inclining to one corner. The wall was carried up full width four feet, and then an offset of 18 inches was made to the rear, carried up two feet higher, and connecting with the wall to form the foundation. Upon this foundation was erected a balloon frame with eight feet posts, boarded outside and in, and the wall made as tight as possible. Upon the ledge created by the offset a wall about four inches high and wide is made on the front, by which, being well plastered with the cement, a gutter or vat is made some three inches deep, with a slight descent to the corner opposite to that where the water is introduced. Into this vat the fresh milk is set while warm, and cold water conducted into it from the well. The milk cools rapidly, and a low temperature is maintained through the day or night. At each milking the pans are removed to the shelves to make room for the fresh milk. Some very nice dairy houses are rigged up entirely above ground, and one I saw last summer in the town of Solon, Cortland county, was so arranged that it seemed almost as good as a spring-house. In that and many others, I noticed the pans were set upon shelves made by turning two narrow boards edgewise, so that the least possible surface was kept from the air. But much of this expense and trouble may be saved if the practice of churning the milk instead of the cream be adopted.

Butter makers seem to be divided into two classes upon this question of churning the milk or only the cream. By far the largest number in this country churn the cream, while in England, Scotland, and a good part of Ireland, the milk is more generally churned. Carefully conducted experiments have established the fact that there is a gain in quantity where the milk is churned, of full seven per cent. over the yield from the cream alone. In small dairies the quality must be much improved, for by churning the milk the risk of tainted cream is avoided. Some of our best premium dairies churn the milk. The most common objection made to churning the milk is the labor; but power (horse, dog, or sheep,) is now so cheap that the objection has but little force, as compared with the increased quantity and improved quality. Where water power cannot be had, sheep power is preferable to dog power for small dairies; horse or steam for large ones.

The condition of the cream or milk when churned is of the highest importance, for upon that depends the value of the butter. If tainted in the slightest degree, no good butter can be obtained. Everything about the dairy must be sweet and pure. Pure air is as essential as pure water, and as much butter is spoiled by foul air where the milk is set as by any other cause. Many a dairy woman has wondered why her butter was not so good as her neighbor's; she had just as good cows, and was quite sure she took as much pains and knew how to make good butter. Her mother always had good butter, obtaining the highest market price, and why she did not also get the best price was a wonder. Her father probably was a very neat man, and did not have his hog pen just under the window of the milk room, the privy on one side and the sink hole on the other. Hundreds of farmers lose from five to ten cents per pound upon all their butter by a neglect of the most obvious rules of neatness, and then blame their wives for the fault of their own shiftlessness. Then again there are great numbers of farmers that water their cattle at some slough hole of stagnant water, and then wonder that their butter is not of the best. Let no man look for good butter who has not pure water, and sweet, good herbage for his cows, and pure air in and around his milk room. T. C. Peters *in Rural New-Yorker.*

[For the Country Gentleman and Cultivator.]

Killing Smut in Seed Grain, &c.

On reading the article with the above heading, on page 257, vol. 17, Co. Gent., it occurred to me that my remedy was much less troublesome. I give it as follows:

Wash the grain thoroughly with water two or three times; swim off as much of the lighter seeds, (oats, &c., if there be any,) as I can—drain off the water; then put in four to six quarts strong brine to the bushel; stir it well; then add enough slacked lime to absorb the moisture, and to keep the kernels from sticking together after it is well stirred. It will be as well to let it stand a day or two in the brine before the lime is added, or it may lie two or three days after the lime is put in, without injury, if it is stirred once or twice a day; but I most generally prepare it and sow it as soon as I can.

The above is my plan for preparing seed wheat. I have practiced it for several years, and I have never known a crop of wheat to be smutty, raised from seed thus prepared. I once bought some very smutty wheat for seed, and prepared it as above, and had a fine crop, while the man I bought of, sowed the same kind without preparing it, and had very smutty wheat. D. G. Williams.

EARLY CUT HAY FOR MILCH COWS.

A writer in the *Dairy Farmer*, is of the opinion that for milch cows, clover hay should be cut as soon as it fairly begins to bloom. It contains then, he says, "a greater per centage of starch, gum, sugar, and fat, especially yellow fat;—after it has passed the bloom it has a greater per centage of flesh-forming material along with woody fibre and mineral matter." The former gives more of fatness, the latter more muscle—hence later cut clover is best for working horses. Experiment proves the superior value of early cut hay for laying on fat, or increasing the milk product of cows or ewes with lambs, and it is found that it is better to begin haying even before the grass gets its full growth, than to delay long after blooming.

☞ Messrs. D. Appleton & Co., New-York, send us Vol. 12th of their *New American Cyclopædia.* This carries in the alphabet from *Moz* to *Par*, and maintains the character of its predecessors for the scrupulous care manifested generally by its Editors and the acknowledged ability of its large corps of contributors. Frank H. Little is the Publishers' Agent in this city.

The Agriculture of Chester County, Pennsylvania.---III.

Dr. Geo. Thomas of Oakland, where we closed our last week's notes, has a farm of 500 acres, of which there are 250 under cultivation. He has underdrained quite extensively—some parts of the farm requiring relief from surplus moisture to a greater extent than is common in many other parts of the county. The other points of most agricultural interest here, were—the dairy of thirty cows, all of them, I believe, Alderneys or Alderney grades, and the flock of South-Down sheep, which latter we did not see. At the spring-house we found about a hundred and fifty pounds of butter awaiting a market, made up in the stamped *pats*, or *prints*, of an exact pound each, as is the uniform custom with all butter sold at Philadelphia, and presenting the neatest and most delicious appearance conceivable.

The ornamental grounds about Dr. T.'s residence receive no small share of his attention. A grapery forty feet long had a very convenient contrivance for obtaining air, much simpler than sliding sash, consisting of a kind of trap-door arrangement opening from below to a width varied with the amount of air it is desired to admit, and preventing rains from beating in upon the vines themselves. I could not make a description very clear without the aid of a diagram, and had better not attempt it here. In an orchard-house we found peaches, apricots and nectarines rapidly approaching maturity. There are some fine and rare trees standing in the lawn, and a little sheet of water below the garden floats a row-boat and furnishes a considerable supply of fish. The kinds of Strawberries grown by Dr. T. are the Hooker, Wilson's Albany, Triomphe de Gand, Peabody and Vicomptesse Hericart de Thury—no other one of which is found to compare with the Wilson's Albany for productiveness and size of fruit, although retained for superiority in quality.

We have so much ground to go over, that we must of necessity be very brief in these notices of individual visits, —a fact which I mention in connection with "Oakland," with much regret, for at no point at which we called were there more features of general interest, if the space to refer to them all particularly could be commanded. Uniting a great taste for Horticultural pursuits with the successful management of so large a farm, Dr. Thomas has brought his estate into a condition having probably few, if any, parallels in the county, as regards a combination of both the beautiful and the useful, in Rural Life.

Proceeding thence up the Valley, we noted from our carriage, a remarkably good wheat-field of 20 to 25 acres on the farm of Mr. Thos. Downing—*perfectly clean*, and with heads thick and plump enough to yield perhaps 30 or 35 bushels per acre; and, at a distance of about two miles from Oakland, called at the residence of Richard I. Downing, Esq., who has been devoting himself for a year or two past, to the management here of about 700 acres of land, of which there are three or four hundred tillable. Like a part of Dr. Thomas' farm, this is in the limestone region, but the application of that mineral makes the wheat and grass turn out none the less famously on this account we were assured; and the grains we saw growing here, particularly a field of 44 acres partly in barley and partly in oats, and one of about 20 acres in wheat, were coming on excellently well. The cultivated fields were all very clean and tidy. Mr. D. makes no butter for sale, but grazes 60 to 70 head of cattle for beef, buying them in the autumn, and generally able to select out of so many, more or less that will repay winter feeding to go to the butcher fat in spring, while the larger part receive hay but no grain during the winter months, and are fattened at pasture the succeeding summer.

Mr. D. burns his own lime, and in passing the kilns we took the pains to ascertain the most approved form and size adopted in their construction. They are of oval form —larger diameter 16 feet, smaller 12 feet, at top—18 feet high, growing wider from the bottom to the top all around at the rate of three inches to each foot ascent—constructed in the hillside so as to have three sides protected by the solid earth, while the front wall is made eight feet or more thick at the bottom, and about five feet thick at top. A flue enters at the bottom perhaps two feet wide and one foot high, which is filled with kindling wood, and covered with a grating; then come layers of coal and limestone in the following order:—

1st	layer	—16	bush.	fine coal,	with	13	inches deep	of limestone	above it.
2d	do.	—16	do.	do.	do.	13	do.	do.	do.
3d	do.	—18	do.	do.	do.	14	do.	do.	do.
4th	do.	—22	do.	do.	do.	18	do.	do.	do.
5th	do.	—20	do.	do.	do.	22	do.	do.	do.
6th	do.	—22	do.	do.	do.	24	do.	do.	do.
7th	do.	—25	do.	do.	do.	22	do.	do.	do.
8th	do.	—31	do.	do.	do.	22	do.	do.	do.
9th	do.	—41	do.	do.	do.	22	do.	do.	do.
10th	do.	—47	do.	do.	do.	24	do.	do.	do.

This is heaping the kiln, and takes four days in burning—consuming ten and a half tons (net) of coal, and yielding about 1,400 bushels of lime, which Mr. D. computes to cost him, for quarrying and all, performing the work as he does with his own teams, &c., only *four cents a bushel*.

Concluding our call at Mr. Downing's with the trial of an excellent sample of sparkling bottled cider, we proceeded perhaps two miles farther along the Valley, passing through Downingtown, to the farm of Dr. J. K. Eshleman, President of the Fruit Growers' Association of Eastern Pennsylvania. And here we may take occasion to say that of all the various localities in which the *Wilson's Albany Strawberry* has become a favorite variety, we have never visited any, where it seems more completely to have cast all others into the shade, than here in Chester County. Dr. E. could raise *five*, if not *ten times the quantity* of fruit from it, as from any other kind, with the same care and on the same land; he has tested *sixty-two varieties*, so that he is qualified to speak, and out of them all had determined to retain but *three*—*Walker's*, which he prefers for his own taste, *Burr's New Pine*, and the *Wilson's Albany*. Of the Wilson's Albany he had had 28 quarts from a bed containing 60½ square feet; the first year after planting it produces well, the second year still better, the third year about as much as the first, after which new beds are formed. At the meeting of the Fruit Growers' Association of Eastern Pa., in June, 1860, there were 25 votes given for Wilson's Albany "for general culture," while the highest received for any other sorts were 8 votes for Horey, and 7 each for Triomphe de Gand and McAvoy's Superior. At the same session Triomphe de Gand stood highest "for special or amateur culture," having 11 votes, while Vicomptesse Hericart de Thury (can't some ingenious pomologist propose an abridgment of this formidable name?—how would *Hericart* answer alone for instance?) stood next, having 10 votes.

One is perhaps excusable for overrating the importance of this luscious fruit, precisely at the season when it is in most luxuriant bearing, and in a region that seems peculiarly adapted for its production. It is true that blessings appear to "brighten as they take their flight," and some one who was asked in our presence which he preferred, the strawberry or the peach, philosophically answered that during the season of either he was quite likely to fancy a preference for *the one that had passed by or was still to come.* But neither the pleasures of memory, nor those of hope, had ever charms for us equal to the delights of realization, as each fruit arrives at its maturity, so only that in quantity it shall suffice; and reverting once more to the question of strawberries, the certainty of a many-bearing kind, the fruits of which, in very bigness as well as abundance, shall enlarge the eyes of those who see, and their solidity endure the handling of those who sell, will go far to counterbalance, to our less fastidious palate, the slightly extra supply of sugar necessary with the Wilson's Albany—at least now that the diminished "tariff" on that commodity has so much reduced its price. Such, we think, is the feeling of Chester county cultivators; certainly of all who grow the fruit for sale.

After leaving the well managed grounds and orchards of Dr. E., whose Chester County pigs, and other stock, we had not had time to look at, we proceeded somewhat farther along the Valley, at length turning to climb Caln Hill, passing the fine farm of the late Richard Pim, and commanding a noble view, at several points, of the landscape below us—thence winding down the North Valley hill by the old Lancaster road—whose course we had been able to descry in the morning from just behind the Oakland Station, eight miles or so away—thus reaching Downingtown by another route. Along Beaver Creek we passed some old "water meadows," where irrigation had been practiced in former times for the purpose mainly of securing the more rapid formation of a thick sod; it was before the introduction of those twin companions in every meadow of modern days, "clover and timothy," and one then had to wait the gradual coming-in of the "natural grasses" at their own good pleasure. Nevertheless we could not but suggest that the grass lands of the present more advanced stage of farming are in reality no less benefitted by irrigation than their predecessors; and it seems a pity that it should not be once more undertaken where the facilities for accomplishing it are so great.

Presently we made a brief stoppage at Mr. W. D. Sugar's, who is an officer of the County Society, and has an excellent dairy farm, with a substantial Chester County barn, and other note-worthy features. The ice-house and dairy room are conveniently arranged in connection with each other, and the latter was evidently in the full tide of successful operation. Mr. S. uses Embrée's patent Butter Worker, and finds it a great labor saver, putting through twenty pounds of butter, in good style, in about three minutes. It certainly looks as though it might bear out the high recommendation he gave it. At the barn Mr. S. has the assistance of water power; he thus cuts the feed for his stock, wets it up, and finds himself well repaid for the extra attention required. He had also tried steaming, I understood, but had not found this process a profitable one. The size of the barn below is 50 by 60 feet, but an addition above gives 80 feet length of floor room. The cellar below is 10 feet high; then comes, constituting the first floor, the stalls for cattle, and the horse stable, 8 feet high; the second floor, also of eight feet height, is occupied by granaries, and bays descending from above; on the third is the thrashing-floor, accessible by a bridge from the hillside without, and, if my notes are correct, it is 22 feet from this floor to the ridge of the roof. The barn thus contains an immense amount of space, and it is all handily arranged. Among the outside matters we find a pig-pen, the lean-to roof of which, instead of being stationary, was hung upon a pivot connecting the center of each end with an upright in the end of the pen, so that the roof turns to slant towards either north or south, as may be desired; in winter time it slants to the north, and keeps that side of the pen tight against the wind, and the southern side open to the sun, and at the approach of warm weather its position is reversed, with of course precisely the contrary effect. No doubt all animals thrive the better for a reasonable degree of attention to their comfort, and we submit Mr. Sugar's pig-pen to the judgment of all merciful readers.

The very first sentence in this correspondence alluded to the commodious barns for which Chester county has been famous for many years. The style of "hill-side" or "double-deck" arrangement, adopted here many years ago, has come now to be considered an indispensable feature in a good barn almost anywhere. Instead of attempting a detailed description of any one in particular at present—(I was kindly promised at some future day, the dimensions and details of two or three which seemed particularly comprehensive and convenient,) I may give the following outline, as conveying a fair idea of them all: A Chester county barn will cost from $2,000 all the way up to twice this sum, but generally runs from about $2,500 to $3,000; as already stated, the walls are substantially built of stone; there is generally a main building, perhaps 50 or 60 feet square, with a bridge-way entrance as we saw at Mr. Sugar's to the thrashing floor in the third story. The doors are all hung with wheels upon a rail above, so as to slide backward; what hoisting there is of hay is done with a horse-fork, and two-horse endless-chain railway powers are in almost universal use for thrashing, &c. The bottom floor, intended for stock, is generally of mortar rammed tightly down, inch by inch, when the mortar is about two-thirds dry. There are very often sheds around three sides, perhaps open through into the barn, both in the basement, and in their upper story, for they generally have a large loft for the storage of straw. The bays in the main building open down from the thrashing floor to the sills above the basement, and the remainder of the space is used for granaries, &c., &c.

From Downingtown to West Chester, we returned by a delightful road along the banks of the Brandywine, at first quite abrupt and precipitous, afterward more undulating, and including grazing lands of great superiority. Here several excellent farms were pointed out to me—among them I remember that of Mr. Isaac Hayes, a large grazier of premium fat cattle. Another excellent grass farm which we had admired near Downingtown, was that of Col. Sam. Ringwalt, who took the first premium in 1859, on the management of fifty acres; in that year six acres and ten perches mowed the first time with timothy and clover, produced 44,147 pounds of hay, weighed dry out of the field—and ten acres of green grass land, not plowed for 20 years, produced a first crop of 32,670 pounds of "remarkably fine hay," and on the 2d of September were said to be ready for the cutting of the second crop. His account with a piece of pasture land 22 acres in extent, was as follows, aggregating for 24 hours:—

720	days' pasturage of	Horses at 10 cents,	$72.00
680	do. do.	Oxen at 8 cents,	54.40
240	do. do.	Drove Cattle at 8 cents,	19.20
1,080	do. do.	Cows at 8 cents,	86.40
176	do. do.	Young Cattle at 5 cents,	8.80
1.205	do. do.	Sheep at 1 cent,	12.05
1,680	do. do.	Swine at 1 cent,	16.80
			$269.65

Col. R. stated at the time, that he attributed his successful results "in producing hay, grass, wheat, corn, potatoes and vegetables, to the application of Columbian guano," having applied it on all his land, and for all crops, since the spring of 1856, particularly on grass, applied in November, 1858, at the rate of 250 pounds to the acre. He had devoted especial attention to raising cattle, and selling hay: selling seven yearly at two years old, at from $35 to $45, and from 25 to 40 tons of hay.

Another week I shall endeavor to bring my notes to a conclusion. L. H. T.

The Agriculture of Chester County, Pennsylvania.---IV.

The next morning, June 14th, we started in the direction of Goshen. Our first call was at the farm of Mr. **Charles W. Roberts**, who was unfortunately away from home. In going out to see his flock of Cotswolds, to which he pays special attention, I noted the nicely piled manure under his sheds, and other evidences of good farming. The townships of Goshen, east and west, are even more rolling than some other parts of the county, but many of the grain crops we thought equal to those we had noticed in the Great Valley; the corn appeared well along and thrifty, and here and there a field of wheat was very clean and promising. After a little *detour* to get a fair glimpse of this region, passing "Rocky Hill," and remarking hereabouts the occasional walnut trees, which are thought to be an index of good land, we made our next stop at the cattle and fruit farm of Mr. **Abram W. Bailey**, in West Town. His land is well managed and very productive, and he thinks it well calculated for orcharding. Several hundred dwarf pears, now in their third year, and other young fruit trees, would go far, in appearance at least, to vindicate the correctness of this opinion. Mr. B. has a dairy of fifteen cows, and is pasturing about the same number of beeves. Upon a farm of not quite 200 acres, he generally keeps in the neighborhood of 50 cattle, young and old; he has twenty-seven acres under the plow—nine each in corn, oats and wheat—annually breaking up nine acres of grass land in the rotation already described; he mows 20 acres of hay, and calls *two tons and a half* per acre a good crop, although he was looking a little higher, I believe, the present season. His barn is a fit one for such a farm, measuring 56 by 120 feet; after looking it through, we took a stroll into the pastures, which evidently had never suffered from "over-stocking" or neglect, and found the grazing cattle to be a very choice and well grown lot.

We then proceeded to Mr. **Wellington Hickman's**, passing, before arriving at "Waterloo," his home farm, another farm which he has more recently purchased, and where we noted that in the renewal of the fences, advantage had been taken of the long accumulation of vegetable matter where the old fences had stood, to plow up the materials of a large and excellent compost heap. At "Waterloo" we found 224 acres of land, of which only about 24 acres are occupied by wood, gardens, orchards, roads, &c., in a fine state of cultivation, as will be shown by the crops it has produced. For ten years past Mr. H. has averaged here a crop of 75 to 80 bushels of corn per acre; last year the season was unfavorable, and the crop the smallest of the ten years—being only 960 bushels on 16 acres. As to the total products of the farm in 1860, a little statement with which Mr. H. was so kind as to provide me, will convey a fair idea, and it shows what is considered good farming in Chester county:

THE CROPS.				
14 acres of Wheat	produced	420 bushels,	at $1.40,	$588
17 do. Oats	do.	1,200 do.	33,	396
16 do. Corn	do.	960 do.	60,	576
Market Value of grain crops on 47 acres,				$1,560
42 acres of Hay produced 75 tons, at $10,				750
THE STOCK.				
30 head of cattle, bought at an average cost of $40 per head, sold for $77 each—profit on the 30 at $37,				1,110
72 ewes, bought at $2.50, sold with their 92 lambs at $4.25—profit on a total of 164 sheep and lambs,				602
Gross product of farm valued at,				$4,022

Of course this statement is larger than the actual net return of the farm, as the hay, and probably much of the grain, are counted a second time in the profit on the live stock consuming them. But that does not lessen the value of these figures for purposes of comparison. It will be perceived that the wheat averaged thirty bushels per acre, and the oats a fraction over seventy bushels; and that the money return was $42 per acre far wheat, $23.29 for oats, and $36 for corn, or an average of $33.19 per acre for the 47 acres in the three grains, which is not by any means an unpleasant result to reach.

With the sheep Mr. Hickman was very successful in the foregoing instance, although not more so I understood than he has been in other cases. Seventy-two ewes were bought in the fall of 1859 at $2.50 each, as above stated; they were the common sheep that are driven to the eastward from Western Pennsylvania or still farther off, and they brought in 92 lambs the following spring. The whole 164 were disposed of at $4.25 per head, to go off as wanted from June to September—the fleece being probably worth about a dollar per head, and the remainder of the price agreed upon going for their mutton value. The lambs were sired by South-Down rams, and probably sold the better for this fact—getting greater size, and helping off the ewes at a fair figure all around. The cattle were bought during September and October, and sold in the spring to be taken from time to time during the season. An item that may be stated in connection with the *sheep* is this: Mr. Hickman considers that pasturing the land with them, before breaking up for corn, and then putting a little salt in the hill, together constitute an almost sure protection against the cut-worm.

Mr. **Hickman's** experience is strongly in support of our frequently repeated theory as to the possibility of adding immensely to the production of the land by a well-regulated system of stock feeding upon it. This farm was awarded the prize as the "best cultivated farm" by the County Society three or four years ago, and Mr. H. then informed the inspecting committee "that since he commenced feeding the large stock which he now winters, his farm is improving yearly, as shown by a largely increased product of hay and grain"—a statement which could probably now be made as truly as it was then. The committee also reported, in language almost precisely the same that I should have now used if they had not anticipated me:—

> "The buildings, placed with a view both to beauty and convenience, are in fine order, having most comfortable and inviting accommodation for man and beast. Around the house are various well selected shade trees, a well tended and luxuriant garden, and an abundance of well selected fruit, ample and convenient kitchen and domestic arrangements free from the usual attendant nuisances. The barn is large, having two floors, on the lower of which are granaries, well planned and smooth in their finish, being also lofty, well lighted and airy; adjoining is a roomy wagon-house; above, a large floor for thrashing, with ample mows and straw room; below are well lighted and well ventilated stables for twenty-nine head of cattle, eight horses, and an extensive sheep stable, besides a large and comfortable apartment for harnessing and cleaning horses, while outside is a wide and well sheltered shed-

ding open to the warm rays of the sun; both ends of the yard are well supplied with water, being altogether a most complete, and well arranged farm and barn-yard."

The size of the barn is 58 by 78 feet, with a shed 33 feet deep at the end. Mr. Hickman has now occupied the farm 18 years, during the first three of which he put on 10,000 bushels of lime—an investment which we presume has never failed to pay satisfactory dividends.

From Mr. Hickman's pasture fields we crossed over to see the Alderneys belonging to Samuel J. Sharpless, Esq.,—including two young cows imported by Mr. S. last August, and one brought over in May, 1858, by Mr. W. F. Potts. Without being quite certain of the identity of each, as there was no one present to act as guide, we can at least pay the general compliment to their appearance, which the beauty and docility of the ones we saw, deserved most highly; and I should not hesitate to rank them side by side with the best importations I have ever seen. On a commanding eminence just above, Mr. S. is just completing a costly and substantial stone mansion, from the terrace around which the view in almost any direction is very fine.

Seating ourselves once more behind the horses, our next stop was with Borrowdale Pritchett, Esq., who had joined us at Mr. Hickman's. He occupies a dairy farm in that immediate vicinity, and we saw enough of it to regret that we had not time for a still longer call. I understood that Mr. P. was now making butter from 30 cows, but for the two years before he has had 35 in milk; in 1860, he made 6,000 pounds of butter from the 35, being an increase of 1,000 pounds upon the gross return of the preceding year, and I found him disposed to make the average per cow still larger hereafter. It is my impression that the amounts mentioned do *not* include the milk, cream or butter consumed on the farm; in 1860 the average was a fraction over 171 pounds per cow per year, which may be considered as doing pretty well. Mr. P.'s "barn is large and convenient, well provided with straw houses, and affording fine shelter for cattle, with running water in the yard. His dairy fixtures are very complete. His cow-house contains 36 stalls, with a feed trough in each. The spring-house, with a neat cottage residence over part of it, for the dairyman and his family, is large and conveniently arranged for all the purposes of an extensive dairy." So said a committee of examination on the part of the County Society, two or three years ago; and so said we when we had also "gone the rounds." The "cow-house" spoken of is used, I believe, only while the cows are being milked; it gives each a comfortable place to stand while she disposes of her morning or evening feed, and at the touch of the "milk-maid singing blythe," also dispenses her proper quota toward the next churning. But *milk-maids* belong mostly to an age gone by, and the *singing*, I believe to a millennial epoch that has never yet arrived—nevertheless, I was told that there is nothing of an agricultural or domestic nature, with which the Chester County farmers' wives are not thoroughly cognizant, "from baking a buckwheat cake to milking a dozen cows," and if they do not practice what they understand in the present instance, it surely cannot be for the lack of the most tidy and convenient arrangements possible for the purpose.

And Mr. Rarey, missionary and expounder of kindness to the unruly horse, might here learn that his message of mercy has also been heard among those who care for a more lowly but now and then scarcely less troublesome class —"weak sisters" among the milch kine,—whose impatience and spitefulness, so characteristic of their sex when not controlled by due self-restraint, in some cases leads to the regular up-setting of the milk-pail, if not to accidents still more annoying. This excessive activity in the muscles of the posterior limbs, Mr. Pritchett successfully overcomes by strapping up the fore-leg on the side on which the cow is milked, precisely in the Rarey method,—it is found that so long as one leg is thus secured, neither of the remaining three can well be employed for kicking over either the person or the pail.

Among Mr. Pritchett's stock we should not forget the Chester County pigs, which are well up in the points of merit laid down by experienced judges.

Messrs. Hickman and Pritchett accompanied us for a pleasant drive to the scene of the Battle of the Brandywine. The Birmingham Friends' Meeting House, used as a Hospital during that sharply contested engagement, is yet standing; and the memories of the Revolution are imprinted on its flooring, in the blood stains still plainly perceptible, of those who were martyrs in the cause. Our day was concluded by a call upon David Woelpper, Esq., near Chadd's Ford, who enjoys, like so many others in this region of splendid prospects, a grand perspective of hill and valley from his door. Here a twelve foot water wheel not only furnishes power for the farm machinery, but also pumps water for the dwelling and out-buildings; and the same labor-saving spirit of improvement manifested in the adoption of such apparatus was perceptible in the progressive appearance of all the farm and stock. Under the latter, we should again make mention of the Chester county pigs, one litter of which, eight or nine in number, was spoken of as having averaged 320 lbs. weight each at nine months old.

In returning to West Chester we passed the farm of Mr. J. H. Osborn, but it was too late to call. Mr. O.'s farm buildings were awarded a premium last year for their excellent arrangement, the committee describing them as "models in every respect," and giving the following particulars in their report:—

> The dimensions of the Barn, built in 1848, are 80 feet long by 58 feet wide; of stone to square, with frame front and gables; containing stalls for 7 horses, 5 cows, and 25 feeding stalls, with shedding attached, 35 feet by 58 feet, and 20 feet by 52 feet, with loft above for hay; and one for shelter, 16 feet by 80 feet; barn, shedding and yard covering a square of 115 feet by 110 feet.
>
> Mr. Osborn has all the necessary out-buildings on his farm, such as carriage-house and gear-house, with tool-house overhead; cart-house, with loft overhead for storing farming utensils; double corn-crib, with shelling floor in the centre; ice-house, hog-house, &c, &c., &c.
>
> The Barn and House are both supplied with running water, from a spring-head sufficiently high for this purpose.

Among other points of interest passed by during the day, was the West Town School Farm of 600 acres. It is said to be conducted with a great degree of skill and success.

Under the Dairy Department in this number of the Country Gentleman, will be found two letters, which I had at first intended to embody in this correspondence, as they were elicited in response to inquiries made, as there explained, in consequence of the belief that more Butter *ought to be packed down* in Chester County for the winter's use and markets. There is a great prejudice in all that region against anything that is known by the name of *pot-butter*, arising from the fact that it is so often a synonym for all the wretched odds and ends of the years' churnings, put down apparently for the very purpose of obtaining as disagreeable and rancid a mass as possible. So strong is this prejudice, that Mr. Hinman justly argued that farmers there could never succeed in packing their butter well and selling it to advantage, until this old name and stigma of *pot-butter* is entirely abolished. The great trouble, he very forcibly insisted, with all who have tried to preserve their butter, has been *an endeavor to keep both the butter and the buttermilk;* and he took every occasion to insist that the latter should be entirely dispensed with, and the former become the sole object of the dairyman.

It will be seen in the letters from Messrs. Shattuck and Wattles, elsewhere published, that they also put great stress upon this point, like all good butter makers. Mr. S. also attaches considerable importance, in obtaining cream in hot weather, to the setting of the milk *in shallow pans;* I noticed especially in several of the Chester county dairies I visited, that the pans used were of a *greater depth* than I have elsewhere seen; and I could not but think this a matter of error, although I was told it had not been found to "make any difference."

The butter in Chester county is very commonly made by contract. The proprietor rents a tenement to a family, who milk the cows and prepare the butter for market, for three cents per pound, having generally included in the bargain, house rent, fire wood, and such other privileges as may be agreed upon between the parties at the time of making the contract. An additional price is also paid the tenant for other labor, such as for feeding and taking care of the cows—sometimes as much as $200 per annum extra. (*Conclusion next month.*) L. H. T.

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[For the Country Gentleman and Cultivator.]

GROWING AND CURING CORN FODDER.

In the first place, to raise corn fodder, the land should be in good condition, or made so, by manuring sufficiently rich to raise a good crop of corn. It should be thoroughly fitted by plowing and dragging, (and rolling if lumpy) until fine. Then take a light one-horse plow, and put on two horses, and commence on one side of the field, to mark out the ground; making the furrows three inches deep. Set the horse next the furrow, walk *in* the furrow—each way—that is, in going one way, the off horse takes the furrow, and in returning the near horse follows the furrow. By so doing, the rows are made two feet apart. The draught rod under the plow-beam should be turned so as to throw the beam well towards the off horse, as every other bout forms a ridge—two furrows being turned together—and as the plow is *light* and runs *shallow*, it is liable to shove off, which would make every other row too far apart. In this way the rows can be made straighter and at a more uniform distance apart,. than with a single horse—a great advantage in after work.

Now, if you have one of Emery's Seed Sowers, take off the roller, so as to make it light, and set it it so as to drop from thirty to forty kernals to the foot, and let it follow and drop the corn in each furrow. Or, in place of a corn dropper, a man with a basket on his arm, can very rapidly scatter the seed in the furrows, but not as evenly as with a dropper. The next thing is to cover the seed. For this, and for other purposes, I have a small drag, made in this way. I got a bar of five-eighths steel, and had drag teeth made 7 inches long, and put these teeth in (eleven in number) between the cultivator teeth to a one-horse cultivator. When used for covering corn, the cultivator teeth and the front drag teeth are taken out, and with a horse to follow the furrow, the work is done very neatly and "at short notice." I suppose the covering might be done with a two horse drag, but not in as "satisfactory manner." The reason why I prefer this way of putting the seed in, instead of using the corn planter to do the *whole* of the work, is this: When the seed is dropped into the furrow from the dropper or the hand, as it falls it scatters and covers more surface than when put in and covered with the planter; therefore is not as much crowded in its growth; and furthermore, I think the seed is better and more uniformly covered. These advantages I consider more than compensate for the extra labor.

After the corn is up, the ground should be kept clean—weeds are an unprofitably crop—until it shades the ground sufficiently to keep out all intruders. For this purpose, I find the small drag just spoken of the best implement, as it can be worked close to the rows, without covering the corn. Perhaps some more *expensive* implement *would do just as well.* Once working out, if the ground is pretty clear, will generally suffice—at all events, the ground should be kept *clean.* The Western or Southern corn are the best varieties for this purpose, as a much larger amount of fodder can be obtained from an acre than from the common sorts. It should be sown *very thick* to avoid too large a growth of stalk. From a limited experience, however, I think I should like the large variety of sweet corn better than all others, but the seed cannot be obtained at a price that will answer for this purpose—and it does not ripen well here, at least I have had bad luck with it.

And now, if my venerable friend has had patience to follow me through this long introduction, I will most cheerfully, but with great modesty, give him the desired information—"the best method to cure corn fodder." I call it the *best*, because it suits the animals that have it to eat, the best; and, therefore, suits me the best. Others may have a better way, but I have not yet found it.

The corn should be cut up when just fully tasseled ont, and laid in gavels of sufficient size to make a small bundle—say eight inches in diameter under the band, when bound. It should be cut when free from wet, by dew or rain. If the weather is fair, and the prospect is that it will be fair to-morrow, it had better lie over night after being cut, and it will become somewhat wilted, and can be more readily bound—the top stalks on the gavels will be sufficiently toughened to use for bands without difficulty. But if there is a prospect of foul weather ahead, it should be bound and stooked at once—it should by no means get wet while lying on the ground. It makes it gritty, and does it material injury. Twelve bundles is the right number for a stook. The stooks should be well and snugly set up, so as to exclude the rain, well braced at the bottom to prevent *blowing* over, and braced *equally alike on all sides*, to prevent *settling* over, as the stalks dry and lose their stiffness. Now, put a strong band around the stook a little *below* the centre, *and draw it tight;* put another band half way from the first band to the top, and then gather up the tops snugly with both hands, and bind them over and put on a band to keep them in that position. This will keep the rain from entering at the top.

The work is now done, and if it has been well done—the stook snugly set up, and strongly and tightly bound, (it requires two men to do this work well) and the lot where the corn was grown is sufficiently near the place of foddering to be convenient, it may stand where it is, until wanted for use, and be all the better for it. But if the lot is at a distance, it would be well, perhaps, for fear of deep snows, or for other reasons, to draw it near to the barn, and re-stook it. By all means let it *remain in the stook*, until wanted for foddering use.

Last fall I had one and a half acres, about sixty rods from the barn, that was stooked upon the ground where it was grown, and it was drawn in, a load at a time, or what I could put upon a wood rack—this would last with other fodder, four or five days—and I find by referring to my farm record, that the last load was drawn in on the 16th day of March, in fine order, and I could not see why it might not have stood until the first of May, without injury. I consider *good bright* corn fodder but little inferior to the best of hay for milch cows—to constitute a *part* of their keeping—it seems to be a change they like very much. Although a few of the buts are not eaten, still I think it a very profitable crop to raise for feeding, green or dry. J. L. R. *Jefferson Co., N. Y.*

Inquiries and Answers.

Various Inquiries.—Will you be so kind as to answer some questions through your valuable journal The Cultivator? 1. What is the best, most thorough and practical work on the hog, and where to be had and the price? 2. Please tell what you know of the practical utility of Wetherell's horse hoe; its iprce, and if obtainable in the west. 3. When corn is planted in drills, how close should the plants stand in the row? 4. Is there any corn planter as good as Emery's for a less price? 5. Is Emery's planter sold in Ohio, and if so where? *Fairhaven, O.* [Youatt & Martin on the hog, and Richardson on the hog, both good works, are published by C. M. Saxton & Co., of New York, the former for 75 cents, the latter for 25 cents. 2. We have used Wetherell's horse hoe, and find it a very useful implement on light soils, free from stones. On heavy clays it does not succeed well. It should be used when the weeds are not over an inch or two high—it covers them up neatly. L. Wetherell, the inventor and manufacturer, lives at Worcester, Mass. We do not know the price, nor where it can be had at the west. 3. The nearness of corn plants depends on the variety. Plants of the King Philip may be five or six inches apart in the drill on rich land; the common "eight rowed yellow," seven or eight inches, and the larger southern sorts nearly a foot. 4. We know of no corn planter for its price better than Emery's—Billing's is perhaps fully its equal. We do not know that they are sold in Ohio, but there are probably agencies there.]

Rose Slugs.—Every year my rose bushes are covered with slugs; they blossom well, but the green leaves are entirely destroyed. Will you in the next number of The Cultivator, please inform me of a sure way of destroying the slugs on my rose bushes, and oblige A Reader. *Milford, Conn.* [This is a wide spread evil. Watch the rose bushes, and as soon as the first slugs appear, dash the bushes several times a day with coarse sand or very fine gravel, which will knock the slugs off. Perhaps coal ashes might do well. Air-slacked lime is often used, but disfigures the bushes. Probably water-slacked lime, which is more caustic, if applied just after a heavy dew or a shower of rain, would effectually corrode the integuments of these depredators and kill them; or if the lime dusting were preceded by a watering of the leaves through a watering-pot, the effect would be the same.]

Raising Young Evergreens.—I planted seed of the Norway Spruce, Austrian Pine, Scotch Fir, &c., in May last, in drills, in the same manner as onions and beets are planted, and I find that the Norway Spruce and Austrian Pine are up. Did I plant these seeds properly, and will the young plants, now that they are up, need shading? C. W. Woodbury. *Henderson Co., Minn.* [The seed of the evergreens named require a fine, rich mould, and should not be planted so deep as onions—the surface of the ground being kept moist artificially if necessary, but not by watering. We cannot say whether the seed were "planted properly," until we know the soil, depth, &c.; but their coming up indicates it, if most of the seeds have vegetated. They will need shading. The Scotch pine usually grows most freely of the three, and we have known it to succeed well without shading, in favorable seasons.]

Wild Buckwheat.—Can you tell me why it is that wild buckwheat springs up on our prairie lands after the second plowing? It certainly is not sown by the hand of man, and it will come up as soon as the ground has been cross-plowed the second year. C. W. W. *Henderson Co., Minn.* [We have never investigated the mode by which the seed of the wild buckwheat are scattered on prairies. The plants of course cannot be produced without seed—any more than calves can be produced without cows. Seed buried beyond a certain depth, away from the reach of light and air, will often remain dormant a long time, They might have been in the soil—or birds might scatter them—or a few scattered, unobserved plants might multiply the seed a thousand fold, and give a heavy crop.]

Water-Rams.—I wish some information in regard to raising a spring for my barn yard. The elevation is about 30 or 40 feet perpendicular, and the distance about 20 rods. Can I raise it by a ram? I can get a fall of six or eight feet, and a very good fountain. I want to raise it to the top of the hill, and then conduct it to my stables. Please give me an estimate of the probable cost. By answering the above inquiries or calling on some of your subscribers to do so, you will greatly oblige, Jas. Edgerton. *Sugar Grove Nursery, Barnesville, Ohio.* [There will be no difficulty in raising the water to the desired height, provided the stream which drives it is at least large enough to fill an inch bore with a considerable current. Care should be taken to have the driving pipe strong, as the successive strokes will burst it if weak. We cannot give an estimate of the cost, but the cost of ram, pipes, digging ditch, laying, &c., would perhaps be eighty or a hundred dollars. Will some one who has erected rams please give the desired information.]

Manure for Gardens—Poudrette.—What kind of manure is the best to put on the garden? How must I make night-soil into poudrette? How is the best way to apply it—what effect has it? The soil is a sandy loam—it was first made into a garden this year. G. O. V. [Well rotted or old manure, copiously applied, finely broken or harrowed up with the soil, and thoroughly intermixed, will soon make a rich garden. Poudrette is several times richer than common manure. It may be easily made by applying frequently or daily to the vaults of privies, a pound or two of powdered charcoal each, or a larger portion of coal ashes, or *well dried* loam in powder, or thoroughly dried peat. The whole, on being mixed over a little, will form an inodorous, friable, and valuable manure. The vault should project two feet beyond the privy behind, this portion to be covered with a trap-door, through which the coal ashes, &c., may be thrown in daily, and the new manure shovelled out once or twice a year. A new garden can be made very rich in a single year, by repeatedly plowing, harrowing, subsoiling, &c., adding each time a coat of finely pulverized or broken manure; but large masses thrown on and plowed under without thorough intermixture, will probably do more harm than good.]

Insects on Wheat.—Enclosed I send you a few wheat heads as a specimen of our bald wheat. The insects on the heads, (if they are not all lost off before you get them,) are new to me and all I have conversed with. I do not see that they have done any damage as yet, but there are enough to eat up a head in a few days, and one head I see has a few of the midge in it. The Mediterranean has but few on, and is so nearly ripe that I do not think it will be damaged much, even if at all. All the difference I can see in the heads, is that the chaff looks black on the grains the insects are on—more so on the Mediterranean than on the White. E. T. C. *Monroe Co., Pa.* [Insects are more easily broken than any other objects sent by mail, hence if merely enclosed in folds of paper, they are sure to be crushed and spoiled, as these were. The fragments remaining indicate that they are a species of aphis or plant-lice—which we have not known to prove destructive to wheat. Small insects may be sent safely in the barrel of a quill, closely stopped at the ends. Larger ones must be sent in phials or boxes.]

Drum Heads.—Will you be so good as to tell me through the Cultivator, what drum heads are made of, and how they are tanned? A Farmer Boy. *Shelburne, Vt.* [Of vellum or parchment—generally of a heavy parchment made from the skins of asses, calves, wolves or goats. The process is rather a nice and complicated one, consisting in cleansing the skin by means of lime, and by scraping in a state of tension, from hair, fat, flesh, &c., grinding its surface by rubbing with chalk or slaked lime, and pumice stone, paring, polishing, &c. The manufacture could not probably be undertaken with success from reading printed directions.]

What Grass to Seed with?—I have a piece of meadow land, about eight acres, which I wish to set in grass for hay. The land is very level—has a very stiff clay subsoil similar to potter's clay. Last November I plowed it from eight to nine inches deep, and followed with a subsoil plow at least four inches; early this spring I applied a heavy coat of lime and barn-yard manure, and planted with corn. I now wish to sow it to rye, and set it in grass for mowing, and would like some of your able correspondents to advise me through your valuable paper, as to the kind of grass best suited to such land. There have been several attempts to set it in timothy, but it has invariably failed. Would not the Kentucky Blue Grass answer? If so what quantity per acre should be sown, and at what season? A reply from any of your numerous correspondents will be thankfully received.

Springfield Farm, July 9, 1861. H. C. WORMAN.

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Counterfeit Fruit.—W. L. Scott of London, stated before the Society of Arts that he had seen in Convent Garden Market, English apples colored superficially to resemble the American Newtown Pippin, and sold as such imported fruit at the rate of 50 cents to 72 cents per doz. —*Ex.* [We should prefer the famed wooden nutmegs, reported to have been formerly sold in this country, or the plaster of Paris cucumbers sold more recently in London, as they would be *durable* imitations.]

THE CULTIVATOR.

ALBANY N. Y., AUGUST, 1861.

☞ A flying visit last week at Rochester, enabled the writer to inspect some interesting experiments now in progress by Joseph Harris, Esq., of the Genesee Farmer, with regard to the application of manures; to call upon our other Editorial and Horticultural friends in the City of Nurseries, and, thus and otherwise, to enjoy two days of recreation from the immediate demands of business. The experiments of Mr. H., to which the morning of our Fourth of July was devoted, include the effect of various fertilizers, especially of superphosphate as compared with sulphate of ammonia, both on grain and grass, although it is to the latter that the trials of the present year have more particular reference. It is some years since Mr. H. first instituted the course of experiments in which he is still engaged, bearing upon the expediency of employing purchased manures, and the principles involved in their selection, for the various crops grown by the American farmer; they are conducted on a considerable scale and with great care, and cannot fail to yield interesting and instructive results. We were particularly pleased to see the trials upon the grass-land, from having examined with some attention two years ago, the similar experiments conducted in the park at Rothampsted by J. B. Lawes, Esq., and the published reports of which have since been noticed in our columns. When the test of *accurate weight* has determined the yield of grass upon the several plots treated in Mr. Harris' trial-field, we shall refer more in detail to the subject.

At the nurseries of Messrs. A. Frost & Co., Ellwanger & Barry, H. E. Hooker & Co., Bissell & Salter, and C. W. Seeley, we had the pleasure of passing calls, and should have been glad to extend the list had time permitted. One of the most striking points observed was the degree of attention now devoted to the propagation of the grape, in all or nearly all the above establishments. Messrs. Frost & Co. and Mr. Seeley have very large stocks on hand, the growth of the present and previous years. Messrs. Ellwanger & Barry not only propagate the grape to an enormous extent, but have also been conducting experiments for several years past, as our readers are perhaps already aware, in the manufacture of wines both from the grape and currant. The Rochester nurseries—if those we visited or passed by in driving about the suburbs of the city, are to be taken as samples,—certainly deserve the wide reputation they have acquired, if cleanly cultivation and the most thrifty appearances, are a fair index to the possession of peculiar advantages, either afforded by nature, or acquired by long experience and great accuracy and skill.

This brief note should not be closed without the expression of our acknowledgments for the attentions kindly extended us both by the gentlemen whose names have been already mentioned, and by D. D. T. Moore and Jas. Vick, Esqs., of the Rural New-Yorker, and Isaac Butts, Esq., of the Daily Union. To Mr. B. we owe a delightful drive down the picturesque banks of the Genesee,—which, as well as the previous excursions with Mr. Harris out the Buffalo road, and to Irondequoit Bay, carried us by many well cultivated farms, much land devoted to nursery purposes, several extensive orchards young or old, and a great surface under the potato, which root is an important specialty with the farmers of Irondequoit. Their soils are generally light, and seem, like those of Watervliet, near Albany, to be peculiarly adapted for the healthy and profitable culture of this now somewhat fastidious esculent.

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☞ We are indebted to Wm. Thorburn of this city, for fine samples of the Wilson's Albany Strawberry grown by Mr. Oakley Osborne of Watervliet, and of the Austin Seedling from the Shaker gardens—both good specimens as respects size and quality of fruit. Also for a basket of Austin Seedling, selected for extraordinary size, to friend Chauncy Miller—four of which weighed two ounces, and many others were but little short of the same standard. We were pleased to learn that this variety has done much better this year than last, and now apparently promises to equal the anticipations of its friends. Mr. Thorburn, we may add, is agent here for a new kind of basket for marketing small fruits, which is very light, handy and neat, and must be quite durable and cheap.

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☞ The Fifth Volume of the "American Herd Book of Short-Horn Cattle," has just been issued from the press of R. Wheeler & Co., Buffalo; and our thanks are due to the author, Lewis F. Allen, Esq., for a copy of it. It contains about 500 pages, and is illustrated with a large number of portraits, mostly drawn on stone by J. R. Page, Esq. The paper, printing, and illustrations are superior to those of any previous volume, and highly creditable to all those engaged in its execution. The price is $5 per vol., or $5.40 when sent by mail, post-paid, and all orders for it should be addressed to Lewis F. Allen, Black Rock, N. Y., as it will not be for sale at the bookstores. Every breeder of Short-Horns, as well as every public agricultural library, should take care to secure a copy of this work. Mr. Allen says:

> Having some surplus copies of the Second, Third and Fourth Volumes on hand, (the First volume being out of print,) I offer them in sets of those three copies at eleven dollars; or, with the addition of the Fifth volume, all taken together, (four books,) fifteen dollars; or either one of volumes Two, Three, or Four, at four dollars each.

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Defective Plans of Houses.—It is rarely that any of the various plans we receive, are not more or less defective, unless from the hand of a professed architect, or one who has made the arrangement of the apartments a study for years. Our correspondents will not feel surprised, therefore, if we omit the insertion of some, or point out defects. We have just received one from J. D. W., for criticism. We will mention a few points needing correction:—1st, the partition between the two upper rooms, rests on a portion of the parlor ceiling, without any support below. As a general rule, all the principal partitions above and below, should coincide, to give firmness to the structure. 2. A still more serious error is starting a chimney on the second floor, without even a partition to support it. 3d. The landing of the stairs at one extreme corner of the chamber, instead of near the center, renders a long entry necessary, and occasions many needless steps. 4th. The necessity of passing from the kitchen through the pantry, in order to reach the cellar stairs, is quite an inconvenience. There are some other defects of less formidable character. They could not all be corrected without re-arranging the whole plan—we would refer our correspondent to plans of similar size in various numbers of the Illustrated Annual Register. The cost of such a dwelling, which is 24 by 30 feet, with a height of a story and a half, and a kitchen wing 20 by 24 feet, would be $800 to $1,000, if well built, with cellar.

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Dr. Farley's Vineyard.—We have spoken on former occasions of this fine vineyard, situated on a peninsula two miles from the village of Union Springs, N. Y. Some of our readers will be glad to learn that it escaped the injury so general throughout the country to the grape, from the severe and unfavorable winter, and that the vines are now making a fine growth and setting fruit. This success is no doubt to be attributed largely to the influence of the water of the lake which surrounds it, in softening the keenness of the winter air.

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☞ Mr. Gail Borden, Jr., has an establishment at Wassaic, Duchess county, for manufacturing "condensed milk" delivered daily to about 3,000 customers in the city of New-York. Mr. B. also puts up a condensed preparation of coffee, containing both the milk and sugar, a teaspoonful of which on being simply dissolved in a cup of hot water, produces as excellent a cup of coffee as the most fastidious would desire. We have received samples through Col. Johnson of this city.

☞ We recently commented at some length upon the assertion, now-a-days quite common, that the average production of American farms—especially of wheat—is greatly diminished from the average of "former times." In a letter on this subject to the Boston Cultivator, John Johnston says that the crops in Seneca county, for the last two years, have been far above the average for the last forty years. "I have my fortieth crop since I came to this country, now on the ground, and my crop of 1859 was equal to any I ever raised, and I have no doubt that the average of the county exceeded that of any year since I have lived here. Last year we had a fair average crop. This year, I am sorry to say, we shall have, to some extent, a failure, owing to the intense frost early in March, which froze the wheat to death in many places. It was not *frozen out*, as in ordinary winter killing, but killed with the roots in the ground." Mr. J. thinks that if Great Britain was now paying a little higher price for the grain she buys of us, the Mark Lane Express would be terrified —not lest we should have none to export—but for fear the immense amount of our exportations should ruin the British farmer.

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Annual Register for 1862.—The attention of ADVERTISERS is called to the fact that the Illustrated Annual Register of Rural Affairs for 1862, is now in Press. No similar work approaches it in circulation among reading farmers, and all that class who are especially interested in Agricultural and Horticultural Improvement.

The number of pages devoted to advertisements being limited, many applications have each year reached us too late for insertion, and it is on this account, as well as in order that the work may be completed as early as practicable, that those who wish for space in this department should *send in their advertisements immediately.* Prices as in previous numbers: One page twenty dollars; one-half page, twelve dollars; one-third page, eight dollars; business cards from two to five dollars. Advertisements will be handsomely displayed, according to the room they are expected to occupy.

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Bright on Grape Culture.—We noticed a year ago at some length, this useful little treatise on what the author terms the "dwarf and renewal system" of culture; on the culture of grapes in pots; and on the management of grape manures. The second edition which now appears, contains many additional pages on manuring and management. Every grape raiser should read this treatise, containing as it does a large amount of practical directions on what may be termed the most artificial and the most thorough mode of raising fine grapes, although the author ostensibly argues with vigor in favor of "imitating nature." There are some eccentricities of thought exhibited in the work, but we greatly prefer a book that is original enough to be occasionally eccentric in this way, to a dull compilation. This edition contains 150 18 mo. pages, is published by the author, and is sent by mail for fifty cents a copy. [See advertisement.]

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Pinching in the Blackberry.—We have elsewhere urged the importance of pinching in the young shoots of the Rochelle blackberry, when about four feet high, and the side shoots when two feet long, in order to render them productive. An old farmer has just informed us, by way of illustration, that when a boy he invariably found those bushes of the wild variety which had been *browsed* in by the cattle to be full of berries, while the tall or spreading bushes which they had not touched, generally had but a scant crop.

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Cutting Timber.—Farmers cut their timber in winter, because they have spare time. To ask them to cut it now would be scarcely listened to a moment, with so much work crowding on every hand. But if you cannot cut it now, it would be better to let it stand till another year. We have now on our fences, rails that were split a few years ago—those cut late in winter or spring, have become nearly worthless by decay; those cut at mid-summer, have dried thoroughly, and are hard and sound. We prefer paying one-half more to have rails and other timber cut at mid-summer.

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☞ The Mark Lane Express, one week later than the extract quoted in our last, reviews in a leading editorial the prospects of the Wheat crop in Great Britain the present season. Notwithstanding the better weather which for two or three weeks previously had given better hopes to English farmers and reduced the price of grains in Mark Lane, the unfavorable conditions of the past season and of the early part of the present one, are noticed one by one, and the conclusion is arrived at, that neither there nor on the Continent can these conditions fail to have exerted an important effect. "We have conversed" says the editor, "within the last few days, with experienced and intelligent farmers, both English and foreign, and they all agree in representing the wheat crop, whether in France, Belgium, or England, as a weak one—the plant thin on the ground, as not having tillered well; the straw and ear, where the latter has appeared, shorter than in general, and exhibiting less indications than usual of a healthy vigorous growth. This, it is to be feared, will be found to be the case generally, except on the *highly farmed light soils, which, from their being less retentive of the moisture, have maintained a better appearance throughout the season.* It is impossible to give even a guess, much less a reliable estimate, of what the deficiency in the next crop will be, so much depends upon the weather of the next three months; but, *that there will be a greater or less deficiency under any circumstances, there does not appear to be a doubt.* The earing and blooming of the wheat will be watched with the greatest interest, and the subsequent weather will be equally important; for another importation of grain like that of last year, amounting probably to twenty five millions sterling, will be enough to embarrass the financial affairs of the country."

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The Cut Worm and Corn Grub Killer.—President Geddes sent some grubs for the examination of Dr. Fitch, who thus answers his inquiry as to the foe of the cut worm, for the opportunity of publishing which, for the benefit of our readers, we are indebted to Col. Johnson. "I doubt not you have noticed in plowed fields a large black beetle with most brilliant golden dots placed in rows on its back. It is the *Calosoma calidum* of Entomologists, and its eggs produce the *corn grub killer*, of which you send a specimen in the tin box. It is a most inveterate foe of the cut worm, grasping the worm in its strong jaws, and in spite of its violent writhing and struggling, securely holding it, and when it finds these worms in plenty, it gorges and surfeits itself upon them, till it is so glutted and distended, it is scarcely able to stir—for it never knows how to let a cut worm alone when it meets with one. It is continually hunting these worms, feeding on nothing else if it can obtain them. Both it and the golden dotted beetle which produces it, therefore, should never be harmed."

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☞ A French Professor, M. Tisserant of Lyons, has recently published a work on Dairy Stock, which is favorably spoken of by the foreign critics. Every traveller on the Continent has witnessed the prevalent custom there of working the *cows* a-field, as we do oxen; accordingly we find a chapter in Prof. T.'s book devoted to their claims as beasts of burthen, in which he argues that, "if they are allowed sufficient time to feed and ruminate, being worked slowly and for a few hours daily on the farm, they yield much milk and thrive well."

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☞ The Editor of the Homestead says of the Phœnix Guano, advertised in this paper by Messrs. Williams & Haven of New-London, Ct., that "it seems, from experiment, particularly adapted to give life and vigor to worn-out soils." He "has used it with marked success on potatoes and turnips."

☞ Having had occasion to visit Watertown last week, we found the Crops in that part of the State all looking finely, with the single exception of the backwardness of Indian corn. The Hay crop was large, and cutting it was then in progress; the weather was inclined to be showery, rendering the curing of it all somewhat a matter of doubt. Spring wheat, which is largely grown in that region, is making a fine appearance, and oats are also said to be doing well. The feed was never more abundant, and stock are consequently looking their best—a fact, which will doubtless have its influence in very much enlarging the display at the coming State Fair in September. A large show of Horses, especially, is anticipated at that time; Jefferson and St. Lawrence—and indeed all that part of the State—are so extensively engaged in the breeding of the Horse, that under favorable circumstances, as regards weather, etc., we shall look for the finest exhibition in this department the Society has ever seen. As no other department presents greater attractions to the public at large, the effect of this fact upon the attendance will probably be proportionately great. Another very attractive feature will be in the turn-out of Working Cattle; in such a Dairy country, moreover, there should be a large show of Butter and Cheese, and there are enough Improved Cattle, Sheep and Swine in that part of the State to make a creditable exhibition, even if the Eastern, Western and Southern Counties should contribute less than their due share. But we do not anticipate any great lack, even from distant localities; those who attended the last Watertown Fair found the arrangements for shipping stock and articles thither by rail, very convenient and satisfactory we believe, and the officers of the Watertown and Rome and Potsdam and Watertown roads will certainly do all in their power to facilitate the objects of exhibitors. From the opposite direction a good attendance is also expected; many of the breeders and farmers in that part of Canada preferring to cross over to Watertown, rather than go all the way to London to attend their own Provincial Show. The time of holding the State Fair, this year, it will be remembered, is September 17, 18, 19 and 20.

☞ "Another phase of the Agricultural operations of that branch of the Patent Office," writes a correspondent of the COUNTRY GENTLEMAN, dating from Philadelphia, the 13th inst., "is now being acted out. A notice was recently published that the distribution of Cereals was going to commence 1st of July. The Philadelphia Agricultural Society have just received their portion, in the shape of a few muslin bags of *wheat* imported last year by the Patent Office. This wheat is not only *badly cleaned*, containing quantities of weeds, or something *not* wheat, which no farmer here would be willing to trust on his land without knowing what it is,—but the wheat itself is *musty*, and most likely will never germinate. A friend of mine who recently visited the Patent Office, says he saw there probably *twenty hogsheads* of it, which they were very busy putting up in bags for distribution through the United States' mails. The cost of transportation to the government must be enormous, and as it is worthless the loss is total.

"My friend took one of the quart bags back to Washington to show them, when they denied at first that they had ever sent such, and that it did not come from there. The clerk who put it up was then called, and had to acknowledge it. How much they have already sent out I do not know, but from what my friend represented to them, it is probable no more will be sent out. It was purchased by Mr. CLEMSON, the late Chief of the Agricultural Bureau, last season in Europe."

— This is but a part of the letter referred to, and we may add that we have heard from other quarters similar objections as to the character of the grain recently distributed. We cannot think that the vast importance to the country, has ever been fully appreciated by the authorities at Washington—of having some one in charge of this Seed distribution *thoroughly competent to undertake the task*, who will not convert the post into an agency for the dissemination of noxious weeds and new insects, among the farmers of the country. We have enough of both, already, as we have proved to our cost; there is no doubt that many of them have been introduced through the carelessness and ignorance of seed importers—an error which we certainly ought not to employ a public agent to commit.

☞ The London *Agricultural Gazette* copies from the COUNTRY GENTLEMAN our account of the Thorndale shipment of Short-horns, and adds a list of the several animals, their purchasers and prices:—

"The 2d Duke of Thorndale has been sold to Messrs. Howard & Robinson for 400 guineas; the 3d Duke of Thorndale has been sold to Mr. MacIntosh for 300 guineas; the 4th Duke of Thorndale has been sold to Mr. Hales for 400 guineas; the Thane of Oxford has been sold to Colonel Pennant for 250 guineas; Imperial Oxford has been sold to Mr. Lawford for 200 guineas; 4th Lady of Oxford has been sold to Mr. McIntosh for 250 guineas. These have thus averaged 300 guineas. Besides these a young bull, Hero of Thorndale, has been sold to Mr. Welch for 200 guineas. These seven animals have thus fetched 2000 guineas, and Mr. Thorne has received the sum he gave to English breeders some years ago for their sires, the two Grand Dukes."

We notice in the report of the Essex Agricultural Society's Meeting at Romford, June 25, that Mr. MACINTOSH there exhibited, but not in competition for prizes, the 3d Duke of Thorndale and 4th Lady of Oxford. The report speaks of them as constituting a feature of no little attraction, and adds that this "American bull is a superb animal, thick, deep, fleshy and symmetrical, and of first rate quality."

☞ During the night of the 22d June, there was a tremendous storm in France, extending through six departments, including hail which cut the crops to pieces, lightning killing men and many domestic animals, and blowing a hurricane which overturned barns and houses, and tore up the trees. This storm is not mentioned in the Mark Lane Express review of the progress of crops, July 1, and the extent of damage done had not been estimated in the Paris Journal of Practical Agriculture of July 5. But the latter paper represents it as so great that subscriptions had already been started for the benefit of the sufferers, headed by governmental appropriations from the Emperor of over eight thousand dollars, divided between the six departments. In England, during the week ending July 1, heavy thunder showers had considerably hindered the making of hay, but on the whole, the week had been regarded favorable:—"Many early-sown pieces of wheat on good soil are likely to be very productive; but the bulk remaining thin, and the breadth this season being diminished, a general abundance is next to impossible, however fine the quality may turn out. All spring corn, with the exception of beans, continue highly promising, and even these are much improved, though the black fly is very prevalent. The root crops have equally advanced. The usual effects of fine weather have appeared in the state of the markets, notwithstanding small supplies of home-growth. New wheat has generally given way from 1s. to 2s. per qr., though farmers in some places with small stocks have resisted the decline; and but for foreign imports, which continue free, there would in all probability have been a rise instead of a fall for the last month. As it is, the week closed with more firmness, and a slight reaction may follow."

☞ We have received samples of the STONE PIPE advertised in another column by D. E. HILL, Middlebury, O. Without having had an opportunity to test them in practice, we can only say that they seem to bear out fully the recommendation of the manufacturer, so far as workmanlike make and substantial appearance go. The prices, it will be seen, are very moderate in view of the quality of the pipe.

From the same maker we have specimens of MILK PANS, also made of stoneware, and as the process is conducted by machinery, we presume the prices must be comparatively low, although we do not know what they are. The advantages afforded by well made stoneware pans, over those of any other material, are generally acknowledged. The samples referred to may be seen at this office.

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☞ In his Notes of a recent tour in Illinois, Mr. HARRIS of the Genesee Farmer tells about one of the large farmers of that State, ISAAC FUNK—who resides near Bloomington; who has 27,000 acres, "all paid for," said to be worth $800,000—one pasture field of 8,000 acres, enclosed with a plank fence, another of 3,900 acres, and a third of 1,000. His great crop is corn, all of which he consumes at home, and is thus able to market about $70,000 worth of cattle per year at New-York. His stock on hand of horses, mules, hogs and fat cattle are said to be worth $100,000. But a Dutch farmer on 1,500 acres of land near Prairie du Chien, Wis., eclipses all competition in the growth of *wheat*—having had no less than *four-fifths* of his land, or 1,200 acres under that crop last year, and the same amount again the present season. Well may any man of English descent in horror exclaim—"Twelve hundred acres of wheat on a fifteen hundred acre farm! Talk of *rotation of crops!!!*"

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WASHING BUTTER.—A correspondent of the Boston Cultivator says he has not had rancid butter in the spring, for thirty years. He washes it. Not with water, which he, with most good butter-makers regards as injurious, but with *sweet* skim milk, salting it afterwards. Have any of our readers tried this way, and with what results? There are some good butter-makers that wash their butter with water, and make a better article than some bad manufacturers who do not wash it. But equal skill, cleanliness and careful management, would doubtless with these good manufacturers make better butter without washing.

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TALL RYE—GROUND BONE AS A FERTILIZER.—To-day, July 12th, while visiting at Mrs. R. L. RUDD's house, North Greenwich, Ct., I went out to see her men bind rye, and seeing some straws not cut off, measured them, and found them *six feet seven inches long*, and well filled. Passing the rye field of Mr. OBADIAH PECK of the same neighborhood, still uncut, I went into one side, not more than ten feet; and seeing from the top of the fence that it looked about alike over the entire field, I selected two straws—the longest one *seven feet one inch*; and I presume I might have obtained those still longer. The entire crop far exceeds anything that I have ever seen. The heads are well filled, and to appearance, I should judge the yield would exceed forty bushels of grain per acre. The seed was sowed, if I remember correctly, early in September; and one hundred bushels of ground bone was sowed broad east on the field of about six acres. Ground bone not only tends to produce large straw, but furnishes a large amount of grain producing material. S. E. TODD.

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☞ We learn that JOHN T. ANDREW, Esq., the well-known breeder, has removed from West Cornwall to *Cornwall*, Conn., where his correspondents will hereafter address him. [See his advertisement on another page of this paper.]

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☞ We learn that Rev. J. KNOX of "Coal Hill," near Pittsburgh, has done a large business the present season in marketing strawberries in the *city of New York*—after an eighteen hour railway journey. It is stated that he has now 50 acres under this one fruit; his "two principal varieties are Wilson's Albany Seedling, and Triomphe de Gand, both of which are of such firm texture that they bear transportation, and are so productive that 400 bushels an acre is not a large estimate of their yield."

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☞ Our thanks are due to our friend C. S. MACK of Lockport, for a sample of the fine cheese sent forth from his dairy. It is rich and delicious, melting in the mouth like butter.

☞ The Eighth Annual Fair of the California State Ag. Society has been appointed at Sacramento, Sept. 16—21—President, JEROME C. DAVIS of Yolo; Secretaries, O. C. WHEELER and N. A. H. BALL, Sacramento. The citizens of Washington and Utah Territories, as well as the State of Oregon, are cordially invited to participate in the exercises of the Fair, on the same conditions with the citizens of the State.

☞ We are indebted to Mr. Secretary KLIPPART for the "Premiums and Regulations of the Twelfth Annual Fair of the Ohio State Board of Agriculture," to be held at Dayton, Sept. 10–13. Competition open to other states.

☞ The next Exhibition of the Rensselaer Co. Ag. & Mechanical Association is to take place on their grounds between Troy and Lansingburgh, Sept. 2–6. The Premium List is a liberal one, and published in excellent style. President, Hon. J. C. OSGOOD—Secretary, Col. W. T. WILLARD.

☞ The St. Lawrence County Agricultural Society will hold its Tenth Annual Fair upon the Society's Grounds at Canton, on Wednesday, Thursday and Friday, the 25th, 26th and 27th of September, 1861. We are indebted to the active Secretary, L. E. B. WINSLOW, Esq., for a copy of the Premium List, which appears to be as liberal as usual.

☞ The Ulster Co. Ag. Society is to hold its next Fair at Kingston, Sept. 25–27—President P. H. BRINK. Address by Col. C. L. KIERSTED.

☞ The Twenty-first Annual Fair of the Saratoga Co. Ag. Society is to be held at Saratoga Springs, Sept. 3—6—President, JOS. BAUCUS; Secretary, JOHN A. COREY.

☞ The Sixteenth Annual Fair of the Rutland Co., Vt., Ag. Society is to be held at Rutland, Oct. 2, 3—President, A. H. POST, Rutland; Secretary, HENRY CLARK, Poultney.

☞ The Union Ag. Society, Falls Village, Conn., holds its Annual Show at that place. The local paper devotes about six columns to the Premium List and Regulations, *without mentioning*, as we can find, *the date on which the Fair is to take place.*

☞ The Fairfield Co., Conn., Ag. Society's next Fair, takes place at Bridgeport, Sept. 17–20—President B. B. PLUMB, Trumbull—Secretary, EDWIN HOYT, New-Canaan.

☞ The Madison Co., Ill., Ag. Society, has its next Show at Edwardsville, Oct. 1–4, competition open to the State. President, DANIEL P. GILLHAM of Alton.

☞ The Eleventh Annual Fair of the Racine Co., Wisc., Ag. Society takes place Sept. 17—19 at Union Grove—President, Hon. J. I. CASE; Secretary, GUSTAVUS GOODRICH.

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TIME OF MARES CARRYING COLTS.—W. H. Ladd states in Field Notes, that from records kept the last thirteen years, he finds that the most usual period of pregnancy with mares is eleven months and a half. As mares get older the time is increased as a general rule, a few days each year.

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ADVANTAGES OF THE SMALL FRUIT CROP.—Throughout a large part of the country, trees of plums, pears, cherries, &c., will afford but a small crop. Cultivators should not be discouraged at this result; the trees are often injured by the heavy loads which they bear, and make but little growth. Give them good culture and attention; place them in a vigorous condition; do not neglect them because they do not pay heavy dividends this year, and they may afford valuable returns the next.

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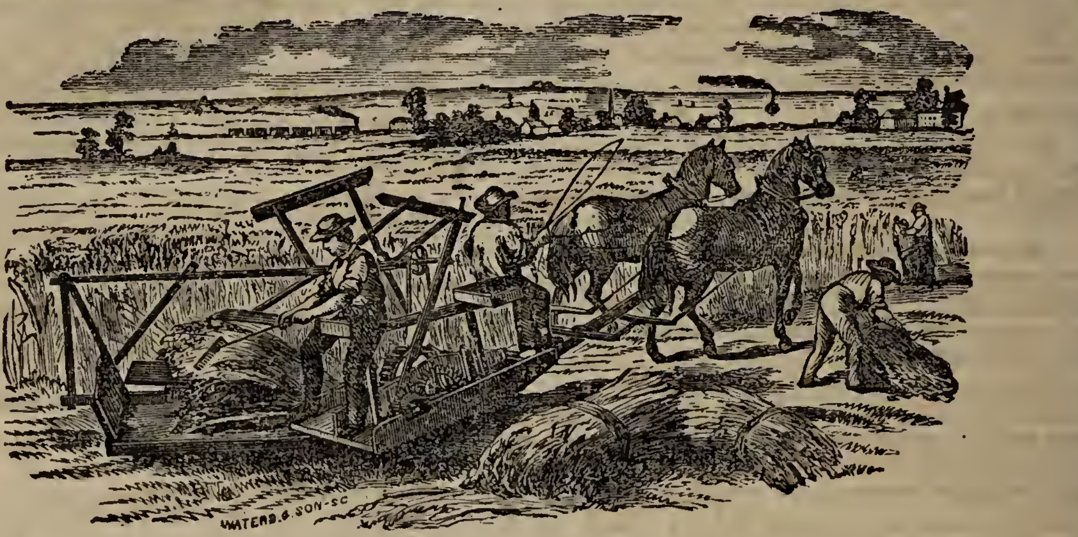
SOILING CATTLE.—The Germantown Telegraph remarks that "in the vicinity of Philadelphia, where the demand for milk and cream is so extensive, soiling is pursued to a greater or less degree, by every dairyman who thoroughly understands his business. Nevertheless it is conducted in very few instances with that systematic detail and accuracy, which have so important a bearing in bringing out the full evidences of its success."

HOMES FOR THE INDUSTRIOUS

IN THE GARDEN STATE OF THE WEST.



THE ILLINOIS CENTRAL RAILROAD CO., HAVE FOR SALE

1,200,000 ACRES OF RICH FARMING LANDS,

In Tracts of Forty Acres and upward on Long Credit and at Low Prices.

THE attention of the enterprising and industrious portion of the community is directed to the following statements and liberal inducements offered them by the

ILLINOIS CENTRAL RAILROAD COMPANY.

which, as they will perceive, will enable them, by proper energy, perseverance and industry, to provide comfortable homes for themselves and families, with, comparatively speaking, very little capital.

LANDS OF ILLINOIS.

No State in the Valley of the Mississippi offers so great an inducement to the settler as the State of Illinois, There is no portion of the world where all the conditions of climate and soil so admirably combine to produce those two great staples, CORN and WHEAT, as the Prairies of Illinois.

EASTERN AND SOUTHERN MARKETS.

These lands are contiguous to a railroad 700 miles in length, which connects with other roads and navigable lakes and rivers, thus affording an unbroken communication with the Eastern and Southern markets.

RAILROAD SYSTEM OF ILLINOIS.

Over $100,000,000 of private capital have been expended on the railroad system of Illinois. Inasmuch as part of the income from several of these works, with a valuable public fund in lands, go to diminish the State expenses ; the TAXES ARE LIGHT, and must consequently every day decrease.

THE STATE DEBT.

The State debt is only $10,106,398 14, *and within the last three years has been reduced* $2,959,746 80, *and we may reasonably expect that in ten years it will become extinct.*

PRESENT POPULATION.

The State is rapidly filling up with population ; 868,025 persons having been added since 1850, making the present population 1,723,663, a ratio of 102 per cent. in ten years.

AGRICULTURAL PRODUCTS.

The Agricultural Products of Illinois are greater than those of any other State. The products sent out during the past year exceeded 1,500,000 tons. The wheat crop of 1860 approaches 35,000,000 bushels, while the corn crop yields not less than 140,000,000 bushels.

FERTILITY OF THE SOIL.

Nowhere can the industrious farmer secure such immediate results for his labor as upon these prairie soils, they being composed of a deep rich loam, the fertility of which is unsurpassed by any on the globe.

TO ACTUAL CULTIVATORS.

Since 1854 *the Company have sold* 1,300,000 *acres. They sell only to actual cultivators, and every contract contains an agreement to cultivate. The road has been constructed through these lands at an expense of* $30,000,000. *In* 1850 *the population of forty-nine counties, through which it passes, was only* 335,598 *since which* 479,293 *have been added ; making the whole population* 814,891, *a gain of* 143 *per cent.*

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As an evidence of the thrift of the people, it may be stated that 600,000 tons of freight, including 8,600,000 bushels of grain, and 250,000 barrels of flour were forwarded over the line last year.

PRICES AND TERMS OF PAYMENT.

The prices of these lands vary from $6 to $25 per acre, according to location, quality, &c. First class farming lands sell for about $10 to $12 per acre ; and the relative expense of subduing prairie land as compared with wood land is in the ratio of 1 to 10 in favor of the former. The terms of sale for the bulk of these lands will be

ONE YEAR'S INTEREST IN ADVANCE,

at six per cent per annum, and six interest notes at six per cent., payable respectively in one, two, three, four, five and six years from date of sale ; and four notes for principal, payable in four, five, six and seven years from date of sale; the contract stipulating that one-tenth of the tract purchased shall be fenced and cultivated, each and every year, for five years from date of sale, so that at the end of five years one-half shall be fenced and under cultivation.

TWENTY PER CENT. WILL BE DEDUCTED

from the valuation for cash, except the same should be at six dollars per acre, when the cash price will be five dollars

Pamphlets descriptive of the lands, soil, climate, productions, prices, and terms of payment, can be had on application to

J. W. FOSTER, Land Commissioner,
CHICAGO, ILLINOIS.

For the name of the Towns, Villages and Cities situated upon the Illinois Central Railroad, see pages 188, 189 and 190 Appleton's Railway Guide.

MOHAWK RIVER UPLAND FARM
FOR SALE.

The farm owned and occupied by the subscriber, situated one and a half miles west of the village of Amsterdam, and containing 138 acres of land, 20 acres being in wood, and the balance under a good state of cultivation. Said farm is beautifully located, and commands a view of the Mohawk River and Valley, Erie Canal, and New-York Central Railroad, that cannot be surpassed. The soil is a gravelly loam, and well adapted to all kinds of grain or grazing; the fences are good, (mostly stone,) and so arranged that stock has free access to water at all times. The orchard and garden contains a large variety of choice grafted fruit, consisting of Apples, Pears, Plums, Cherries, Currants, Gooseberries, Strawberries, Grapes, &c. The buildings are nearly new, the house and principal barn having been built within the last ten years. The house is stone and built expressly for A CONVENIENT, COMFORTABLE FARM HOUSE; the main barn is 64 by 32 feet, with 20 foot posts, and basement 10 feet high; it has other barns and sheds adjoining, sufficient to accommodate a large stock. There is also on the premises a small tenant house, nearly new and in good repair. The above farm will be sold on liberal terms, and possession given the first of April next; or if purchaser desires, can buy stock, farming utensils, &c., and have possession immediately. For further particulars inquire on the premises or by mail, of

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June 27—w&mtf. Amsterdam, N. Y.

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REFERENCES.—John Stanton Gould, Josiah W. Fairfield, Charles P. Waldron, Charles F. King, Captain Steamer Oregon, Hudson, or of the subscriber on the premises. SOLOMON V. GIFFORD.
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A yearling BOAR HOG, several SOWS and PAIRS OF PIGS two months old.

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THE ILLUSTRATED
1862. ANNUAL 1862.
REGISTER OF RURAL AFFAIRS.

THE EIGHTH NUMBER, for 1862, of THE ILLUSTRATED ANNUAL REGISTER OF RURAL AFFAIRS is now nearly ready for the press. In the attractiveness and value of its contents we do not think it has been surpassed by any preceding number. We submit below a partial abstract of its contents, which will show their variety and the extent to which they are illustrated—the present number of the ANNUAL REGISTER containing more than

One Hundred and Sixty Engravings.

The ANNUAL REGISTER for 1862 will be ready early in September, and we are now prepared to receive orders for single numbers or in quantity, which will be filled as soon as it is issued. The attention of OFFICERS OF AGRICULTURAL SOCIETIES, and others who propose attending Town, County or State Fairs this Fall, is particularly requested to the ready Sale which may be had for the REGISTER during these anniversaries, and on other occasions throughout Autumn and Winter. TERMS—as heretofore: SINGLE COPIES, postpaid, TWENTY-FIVE CENTS; ONE DOZEN COPIES, postpaid, TWO DOLLARS; ONE HUNDRED COPIES, FIFTEEN DOLLARS, and larger quantities at a farther reduction.

TO ADVERTISERS.

TWENTY PAGES only will be devoted, as in the previous issues, to ADVERTISEMENTS. The number being limited, more or less applications have each year arrived too late for admission upon them; last year some of our best friends and advertising customers were thus disappointed, and on this account, as well as in order that the work may be expedited as much as possible, it is desired that all who wish for space should send in their advertisements IMMEDIATELY. Notwithstanding increased circulation, prices remain for 1862 as heretofore:

One Page,	$20.00
One-Half Page,	12.00
One-Third Page,	8.00
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PARTIAL ABSTRACT OF CONTENTS.

Among other valuable chapters, the ANNUAL REGISTER for 1862 will contain the following:—

I. FARM BUILDINGS—THIRTY ENGRAVINGS and Four Designs.
  1. General Considerations.
  2. Estimating the Capacity of Barns.
  3. Form of Farm Buildings.
  4. How to Plan a Barn.
  5. Barn Basements.
  6. Cost of Barns.
  7. Design One—Barn for Fifty Acres or Loss.
  8. Design Two—Barn for Seventy-Five to a Hundred Acres.
  9. Tool Rooms and Details in Stable Construction.
  10. Design Three—A Large Three-Story Barn.
  11. Design Four—A Small Three-Story Barn.
  12. Various Details.

II. VEGETABLE PHYSIOLOGY, or How Plants Grow—SIXTY-ONE ENGRAVINGS.
  1. The First Formation of the Embryo.
  2. The Seed and the Requirements for its Germination.
  3. Process of Germinating in Plants having One and Two Seed Leaves.
  4. Mode of Growth and Structure of the Plant or Tree.
  5. The Root—Layering; Cuttings; Transplanting.
  6. The Stem and Branches.
  7. The Buds and Leaves.
  8. The Process of Growing.
  9. Principles of Grafting and Budding.
  10. Flowers—their Organs; the Crossing of Different Varieties.
  11. Species and Varieties.

III. THE GRASSES—THIRTEEN ENGRAVINGS.
  1. Importance of the Grass Crop.
  2. Descriptions of the more Common Species.
  3. Nutritive Value of Hay.
  4. Management of Grass Land.
  5. Suggestions in Hay-Making.

⁂ This article includes plain and concise descriptions of no less than TWENTY-TWO of the different grasses, with the peculiarities of which every farmer should be familiar—eleven of them accompanied by carefully drawn illustrations.

IV. LIGHTNING RODS—THIRTEEN ENGRAVINGS.
  1. Essential and Non-Essential Points in their Erection.
  2. Materials and Connections.
  3. Length, Height and Supports—Stiffeners above the Roof.
  4. Entering the Earth.
  5. The Copper Rod—Various Errors—Cost of Rods.

V. BALLOON FRAMES—TWENTY-FOUR ENGRAVINGS.
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  2. Method of Raising—the Sills, Studs and Wall-Plate.
  3. Directions for One-Story Buildings.
  4. Directions for Two or Three Story Buildings.
  5. Siding, Lining and Construction of Partitions.
  6. Framing Large Barns.

VI. MOVABLE-COMB BEE-HIVES—EIGHT ENGRAVINGS.
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  2. Descriptions of Different Kinds.

VII. THE ORCHARD AND GROUNDS—FOURTEEN ENGRAVINGS.
  1. Summer Pears—Old and New Sorts.
  2. The Value of Orchards.
  3. Training Weeping Trees.
  4. Removing Large Trees.

VIII. THE FARM—HOW FORTUNES ARE SOMETIMES SUNK.

IX. FRUITS AND FRUIT CULTURE—ONE ENGRAVING.
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  2. Directions for Transplanting.
  3. Root-Grafting the Grape.
  4. Depredators and Diseases.
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  6. Selection of Hardy Grapes.
  7. Young Cherry Trees.
  8. High Prices for Pears—The Glout Morceau.
  9. Broadcast Cultivation—Apples in Wisconsin.
  10. Hardy and Tender Trees—Culture of the Blackberry.

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  2. Hiram Mills' Way of Making Butter.
  3. Two Valuable Rules in Making Cheese.

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  9. Training Draft Animals—Cattle Racks.
  10. Swine Fed on Skim Milk—Treatment of Sows with Young Pigs.
  11. Relieving Choked Cattle—Weaning Lambs.

XII. RURAL AND DOMESTIC ECONOMY, &c., &c.

XIII. USEFUL TABLES.
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  2. Weight of Grain to the Bushel.
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  5. Weights of a Cubic Foot and Bulk of a Ton of Different Substances.
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  7. Velocity of Water in Tile Drains.
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  11. Quantities of Seed to the Acre.
  12. Quality of Different kinds of Wood.
  13. Gestation of Animals.
  14. Quantity of Garden Seeds Required for a Given Area.

XIV. ADVERTISEMENTS.

This, preceded by the usual Calendar pages and Astronomical Calculations, forms a book which is certainly cheap at its retail price, and the Publishers, with a view of rendering its circulation still wider and larger than that of any previous Number, are prepared, as above intimated, to offer the most liberal Terms for its introduction in quantities, either to Agents, Agricultural Societies, Nurserymen, Dealers in Implements and Seeds, or any others who take an interest in the dissenination of useful reading, and in the promotion of Rural Improvement.

Address all orders or inquiries to the publishers,

LUTHER TUCKER & SON,
August 1, 1861. ALBANY, N. Y.

IMPROVED SOUTH-DOWN SHEEP.—I shall offer about 40 head of yearling Rams, breeding Ewes, and ram and ewe lambs at my Eleventh Annual Sale, on Wednesday, October 2d, 1861. Having bred from Mr. Webb's topping rams, the quality of my sheep are surpassed by none.

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THIRD] TO IMPROVE THE SOIL AND THE MIND. [SERIES.

VOL. IX. ALBANY, N. Y., SEPTEMBER, 1861. No. 9.

PUBLISHED BY LUTHER TUCKER & SON,
EDITORS AND PROPRIETORS, 395 BROADWAY, ALBANY, N. Y.

J. J. THOMAS, ASSOCIATE EDITOR, UNION SPRINGS, N. Y.

TERMS—FIFTY CENTS A YEAR.—Ten copies of the CULTIVATOR and Ten of the ANNUAL REGISTER OF RURAL AFFAIRS, with one of each free to the Agent, Five Dollars.

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Editorial Correspondence.

The Agriculture of Chester County, Pennsylvania---Conclusion.

Our first call, June 15th, was upon Mr. **CHARLES E. HIESTER**, at "Edgewood," a farm he has now occupied for eight years—purchased in rather a rough condition, but already showing the marks of very great improvement. It embraces a hundred and fifty acres, thirty of which are in wood. During our stroll about the fields, we came upon one of wheat—a part sown in accordance with the customary rotation, after oats, and a part following a crop of potatoes—the soil and treatment of the two otherwise quite similar—and the difference in favor of the portion preceded by the potatoes was very distinctly marked by taller straw and thicker heads. Mr. H. has a flock of Cotswolds principally from the Ware and Reybold stock, including about 25 breeding ewes; these sheep average with him, for yearlings, ewes and all, a fleece of about 9 lbs. per head. The common ewes, bought for winter feeding, give lambs in spring of one-half Cotswold blood, and these fat early and reach a good size for the butcher about harvest time. Besides a total flock of about 60 young and old, Mr. H. has 20 to 25 cattle, some of these very good—also Chester County pigs; his plowed land was 15 acres in wheat, 13 in corn and 12 in oats. Here I should not omit to mention the garden and strawberries—the latter of which were as handsome specimens in size and quality as any that we had elsewhere seen, and the cream accompanying them certainly spoke well in richness for the dairying merits of Chester County Short-horns.

We next proceeded to Mr. **FRANCIS STRODE**'s, and here I had thought it an appropriate place to speak at some length, over the living examples, of the origin, breeding and points of the Chester County pigs—in all of which, however, I have been anticipated in the kind letter already published (see CO. GENT. July 18, p. 44) from one who was better qualified to undertake the subject. At Mr. Strode's we had a good illustration of what he there has written, and a peep likewise into his well-ordered dairy, where the milk of 14 cows is put through one of Embree's big hand churns for the benefit of the Philadelphians.

Thence we "fetched a circuit," enabling us to appreciate that predisposition to irony, which, according to some authorities, forms the most salient feature in American humor, as we pass through "Feather-bed lane"—so called, as the reader will already have imagined, from its being anything but soft and easy for either team or carriage—and to command another of those extensive rural panoramas, hitherto so many times referred to, from the hill beyond—at length passing through several fields to reach the house of Mr. Lewis Sharpless, from whose piazza the battle ground of the Brandywine was again spread out before us in the distance. Here especially I had an instance of the *cleanliness* already mentioned as a prominent characteristic of Chester county farming, and there are few tracts of land of equal extent more productive, I was told, than the hundred acres owned and cultivated by Mr. S. Said the farm committee of the county society, after reviewing this farm three or four years ago—"they found the fields laid off in uniform size, and divided by fences straight and upright, and well set with grass; his corn of even growth, with luxuriant fodder and heavily cared. Though nearly three weeks have passed since we have had rain, the pasture fields were clad with a rich and abundant covering of nutritious herbage, almost as fresh and verdant as in the early summer months, while the scrutiny of your committee could scarcely point out a noxious weed throughout the fields or in the fence corners; in fine the committee point to this highly cultivated farm as an examplar for the rising generation of farmers; here they will see exhibited the fruits of the experience and observation of half a century, and of the highly intelligent and practical mind of the veteran and energetic farmer."

The farm of Mr. S., as above intimated, contains about one hundred acres beside woodland, and the ten-acre cornfield and other crops we went to look at, afforded abundant evidence of the sincerity of the committee's compliments. He "cultivates about 10 acres annually in corn, 10 in oats and 10 in wheat; mowing about 25 acres. His average crop of wheat is about 30 bushels to the acre; of corn, 75 bushels; of oats, 75 bushels; and he estimates his crop of hay in 1860, at the high figure of 2½ tons to the acre, though the average yield one year with another will not exceed 2 tons. He applies annually between 500 and 600 bushels of lime, and about 3 tons of plaster. The farm is a grazing farm, and the average number of cattle and horses kept annually upon it is about 40."

After leaving Mr. Sharpless, we passed the excellent barn and pleasantly situated residence of Dr. Biddle; and, beyond, a field of 15 acres—upon whose farm I have forgotten—of which I was told that in 1859 it produced 80 bushels of corn per acre; in 1860, 50 bushels of barley, and, as we looked over the fine growth of wheat in which it was this year standing, we considered it good for at least 30 bushels of that grain the present season.

The opportunity of seeing so much of Chester Co. farming I have already ascribed to the kind attentions of D. B. Hinman, Esq., President of the County Society, and I should add that for the ability of going over so much space in so short a time, I was indebted to the activity and endurance of his horses. With J. L. Darlington, Esq., as consulting guide and pilot in general, we were thus enabled to make the best of our hours each day, but the visit which came next in order to those above described, proved by no means the least pleasant or interesting of them all—to wit, that at the residence of Mr. Hinman himself. Here we found a most commodious barn, improved stock of several kinds, and other evidences of good farming. The barn, to begin with, is 87 by 130 feet, and contains almost, if not quite, every convenience that could be desired under a single roof, and, beyond the ordinary demands of a barn, extensive accommodations for poultry, of which there is quite a variety kept. We may hereafter be able to furnish a full description of its arrangements, which are similar to those already alluded to as characteristic of the best barns of the neighborhood, with a large lofty shed attached, enclosing a cattle yard, and having piled beneath it the winter's manure in tidy shape for rotting to good advantage. A pipe, carrying water from the eaves of the shed, is suspended above the manure heap, so that if there seems to be danger of its heating at any time or place, the water can be conducted to the required point; and the yard is made tight below so that nothing escapes. The liquid manure Mr. H. has preserved and experimented with separately I believe, but I understood him to say that the results obtained from its use were such as to convince him that the best and most economical method of employing it was by means of absorbents in the ordinary compost heap.

The much-talked-of bronze turkeys, which owe so wide dissemination during the past two or three years to the noise they have made in the papers, Mr. Hinman has some excellent samples of, but had been so unfortunate as to lose a fine gobbler, quite lately obtained from Connecticut. I do not recollect having seen any description of the improved sort of *turkey-pen*—so to speak, for it is not a *coop*—adopted by Mr. H. from directions given by Mr. Ramsdell; it is simply an enclosure formed by four wide boards placed on edge—say 18 inches wide and at their full length—with a cover along one side of the square thus constructed, two or three feet wide, slanting enough to shed the rain. This gives a pen which the turkey hen can leave at will, but her chickens are prevented from straying out with her, since they cannot get over the sides, and so long as they are confined she will not go far; at the same time they have ground enough to scratch, shelter from storms, and room for exercise in the inside. By the time they are large enough to climb in and out, there will be no danger to them from exposure, and probably both mother and young will be sufficiently accustomed by habit to regular feeding here, to be quite domesticated, and less inclined to stray to any great distance.

In the pastures we found the Alderneys which Mr. H. ranks as *the* cattle for a dairy country; he means to prove the opinion good, by obtaining the best, and has among others a charming young bull, a grandson of the noted Massachusetts cow "Flora," and "Beatrice," a cow imported by the Massachusetts Society. The herd, moreover, includes two remarkable instances of fecundity at a very early age—a cow which had *twin heifer calves* when she was herself just *thirteen months and twenty days old*—and another cow *two years old*, with her *second calf* by her side, born a fortnight before our visit. You are two yoke of oxen, the perfect matching and excellent training of which, not less than their style and color, bespeaks a Connecticut origin, and it is a matter of no surprise to learn in fact, that they are in some measure old acquaintances. They were purchased for Mr. H. I believe by Mr. John T. Andrew.

The Cotswolds are a feature on Mr. Hinman's farm of scarcely less importance than the Alderneys. He has a ram and two ewes imported for him from Cirencester very recently by Mr. Howard, and his flock altogether, now numbers about thirty head.

In my last I mentioned Mr. Hinman's efforts to attract the attention of Chester county dairy farmers to putting down butter for winter sale—an experiment he tried very satisfactorily last year, and was preparing to repeat the present season. He sold in December, 1860, several hundred pounds of butter made during the preceding June and July, at 30 cents a pound, and thought that "if one-half of the butter made in the vicinity of Philadelphia during the warm months, was packed on the eastern plan, those doing it would relieve themselves of a vast amount of trouble and expense, and would considerably increase their income"—beside greatly benefitting those who have not the energy to try the experiment, by enabling them to obtain better prices during the butter season—when the market is overstocked.

Mr. Hinman next conducted us to "Highland Home," where we made a brief call upon our occasional correspondent Mr. Joseph Cope, who is a veteran among good Chester County farmers, in addition to having been an early convert to the importance of possessing and breeding from improved animals. As long ago as 1839 he imported South Downs and Short Horns, having been, next to John Hare Powell, the pioneer in this good work, in that part of the country. Some of the descendants of both the cattle and sheep, were among those we had a brief glimpse of here—for our time was short—and at John and Francis Worth's, where we also made a brief call. The latter gentlemen have nearly 50 ewes, I understood, in their South Down flock, and among the Short-Horns there is blood that has passed through the hands of Vail, Morris, Spencer, and others of our best breeders. A farm of 97 acres owned by one of these gentlemen, was keeping over a hundred sheep, and a dairy of half a dozen cows; and, if my memorandum is correct, the other farm —also of about 100 acres—was divided as follows: Ten acres each of corn, oats and wheat, 18 mown for hay, 10 under wood, and the remainder in pasturage, on which 21 bullocks, some of them very fine, are now fattening.

— From such details as these, in individual practice, a general idea can be gathered of the system adopted by the best farmers of a considerable area. So long as Agriculture remains in its present condition—a condition in which there is so much to be learned from example, and so little from any source to which practice does not chiefly contribute—the interest of the farmer will centre mainly in such facts as he can ascertain from the common daily experience of others, rather than in speculations, or even in abstract statements of the principles that are really involved in experience. Hence I cannot think it "labor lost" to present a view of the farming of any locality, however trivial its details may now and then appear, so only that the view be as nearly accurate as possible both in little things and large. We have now devoted considerable space to the Agriculture of a region greatly favored by Nature and to some considerable extent at least improved by skillful culture; and while, as in any grazing and dairying country, we have been less concerned with the actual management of each crop, than with getting at the proportionate prominence it bears to other crops and to the amount of stock kept, such a record of the condition of Farming in such a region at least seems worthy of preservation, and may perhaps also be made to some extent, practically suggestive in other places.

There are some items that occur to me as not having been included in the general views of the County and its agriculture with which I began. Among these, is the frequency of *tenant houses* for the occupancy of at least one family on almost every farm of much size. They are put up at a cost of from $300 to $400; and it is common to give the tenant for his services, the house rent and the keep of a cow, together with perhaps $150 per year, and such other perquisities—so many bushels of potatoes for example—as may be agreed upon. I have already incidentally referred to this practice on the dairy farms; and I never find it in vogue to any extent without noting down the facts involved, and desiring to commend the system to still more general adoption through the north and east, both as a measure of relief for farmers' wives, whose share in the labors and credit of good farming should never be overlooked, and as calculated to secure in the end a much better class of assistants for the farmer himself.

Before leaving, I had a glimpse of the Nursery Grounds of J. L. Darlington & Co., established in 1842, on 20 acres of land, and now having nearly a hundred under cultivation, perhaps three-quarters in fruit trees, and the remainder in ornamentals—and conducting an extensive business, especially to the south and southwest. The land is well adapted for the purpose, and its situation so near the many railroad lines that center in Philadelphia, render it accessible to any part of the country.

I also had the pleasure of calling upon Dr. William Darlington, now an octogenarian, whose accomplishments in Botany and scholarly writings have made his name familiar among men of science in both hemispheres. His *Flora Cestrica*, originally published many years ago, at once attracted attention for its systematic and correct enumeration and arrangement of the plants of the county, so much so that when the late Dr. Bromfield, the distinguished English botanist, undertook a similar task in the Isle of Wight, he copied Dr. Darlington's system, and in acknowledging the fact in his introduction compliments Dr. D. very highly upon the success and usefulness of his labors. To my conversation with Dr. Darlington I am indebted for the historical facts, to which allusion has been once or twice made in these notes, and to the map of the county, which illustrates his work, I mainly owe the means of describing its geological formations. Dr. Darlington was also kind enough to enlighten me upon several points in which I had been in some confusion as to several kinds of the grasses—mainly with regard to the identity of the "green grass" of this region with the "Kentucky blue grass;" and I shall hereafter avail myself of the information, which was accompanied, I may add, with practical examples from his garden and the roadside, as we walked together to visit the rooms of the "Chester County Cabinet of Natural Science," an association incorporated in 1831, of which Dr. D. has always been a leading member, and whose extensive collections I am sorry not to have the space to refer to more at length. They include the Birds, the Minerals and the Plants of the County—the last named collection now forming a Herbarium of nearly 8,000 species, including many from distant climates and countries, as well as those indigenous to the neighborhood, and all arranged with such perfection that any one could be exhibited on demand as readily as a word can be found in a quarto dictionary.

I had also promised myself a brief review of the successful operations of the County Society, but the limits of this article have already been passed, and I can only subjoin the secret which its indefatigable Secretary, J. L. Darlington, Esq., says he has found to underlie the permanent prosperity of this and other such Societies—namely, to "*interest the ladies.*" Their presence not only adds vastly to the interest of an exhibition and the household departments to which they contribute to its usefulness, but if they are in attendance, he finds there is never any lack of the other sex, both as spectators and as competitors. I publish this secret with a deep conviction of its importance to the managers of all similar Associations, and only hope they may have the wisdom to benefit thereby.

There are many other farms which my kind conductors, Messrs. Hinman and Darlington, mentioned, but where we had not time to call—such as those of Messrs. Lewis P. Hoopes, Caleb Brinton Jr., Isaac Hays, M. B. Hickman, Caleb S. Cope, Wm. P. Townsend, D. B. Hinman Jr., and others, whose improved stock not less than their good farm management it would have been interesting to examine. To Dr. Thomas and Wellington Hickman, Esq., as well as to D. B. Hinman, Esq., and Mr. Darlington, I should express my thanks for courteous hospitalities.

— So much for the farming and farmers of Chester County, Pennsylvania. Those who "have been there," will be able to judge whether these notes have anywhere failed of justice, or if, on the other hand, they have "anything extenuated." If there is any other district in Pennsylvania or elsewhere, presenting on the whole greater attractions of its kind to the agricultural tourist, I can only say in conclusion, that I have made no arrangement, as yet, *with regard to the employment of my time next June.* L. H. T.

Cost of Making Hay---Old and New Modes.

We sometimes hear complaints that farming is becoming more difficult, laborious, and costly—and that good times have gone. As a single proof of the fallacy of this notion, we may cite hay-making. We believe the following a fair estimate of the cost of the old and new ways—the old, with the grass cut by scythe, tedded by fork or stick, raked by hand, cocked by fork, often opened and dried after a storm, pitched on a wagon and pitched off into the barn. By the modern mode, the hay is cut by two horses, needs no tedding, is raked with a revolver, and is either drawn by means of a rope or sweep, or on a wagon, and pitched by the assistance of a horse-fork with little labor. The hay-sweep, to be described and figured in the forthcoming number of the Illustrated Annual Register, enables two horses and two boys to draw 20 or 30 tons a day.

Old Mode—10 *Acres.*

To 7 days mowing, if erect; 12, if lodged; average, say 9 days, and board, ...	$11.25
" spreading by hand, say....	1.00
" raking by hand, 3 days,....	3.00
" putting into cocks, 2 days, ...	2.00
" drawing, 3 days, two horses and three men, ...	6.00
" waste of quality by unavoidable wetting by rains, average,	5.00
" opening cocks after rain, &c., average,....	2.00
" cost of making 15 tons of hay—1½ to the acre, ...	$30.25

Or two dollars a ton. The real amount was often much more. It was usually reckoned at one-half the whole cost of the hay.

New Mode—10 *Acres.*

To cutting, 50 cents per acre, usual charge,....	$5.00
" raking with horse, half a day,....	1.00
" drawing, if by wagon and horse-pitcher, ...	4.00
" possible waste, by rain, say....	2.00
	$12.00

Or 80 cents a ton.

This amount will often be greatly reduced. For example, the horse for raking is usually on hand at little cost, and the man and horse need not be reckoned at $2 per day. The drawing, if done by a hay-sweep, would reduce the cost at least one dollar. The danger of loss by rain becomes very small, for the hay may be cut by the mowing machine just whenever weather and hands render it safe and convenient; and not during all weathers, as formerly, when hands had to be kept closely at it, to get through before the end of summer. The hay-rake, horse-fork, and sweep, will place several acres of dry hay under cover in a short time, and a respectable share of prudence would thus almost entirely obviate the danger of injury from rain. Good machines, and every facility arranged in the best manner, combined with farming so good as to give two to three tons of dried hay to the acre, would probably enable the energetic and intelligent farmer to secure his crop for *fifty cents a ton.* Improvement, here, has decidedly the advantage.

PRESERVING FRUITS.

A correspondent of the Prairie Farmer gives the following as his method of *preserving strawberries*:—"They should be gathered on a warm, dry day, carefully hulled, then plentifully covered with a preparation of good rich cream and powdered white sugar; after which they should be masticated as quickly as possible, and, if convenient, as suddenly swallowed."

This we know to be an excellent method, and it will apply to other fruits. The principle involved, and for which we quote it, is—fruits are best and most economically used, when eaten in a *fresh state.* Manufacturing "preserves" is laborious; sealing up in bottles requires time, work, and skill; although each mode may be adopted to a moderate extent. But the main thing is to provide the *circle of fruits,* so that a fresh supply may be had the year round as different sorts successively ripen. Strawberries will begin the summer; the early cherries will follow closely after; later cherries, currants, gooseberries, raspberries, and the Rochelle blackberry will continue the succession for several weeks. Early apples, early pears, the primordian plum, and apricots, all make their appearance by wheat harvesting; following soon after, are numerous other varieties of pears, apples, peaches, plums and grapes, which furnish a rich profusion till nearly winter. After this time, the chief reliance must be on winter apples and winter pears, and well ripened grapes. Pears, well managed, will keep till spring; the only difficulty is, they are too sparingly raised. Apples prolong the supply into summer, if good keepers are in abundance, and the proper kind of apartments provided—namely, such as are neat and clean, cool and dry. Grapes will keep till spring if they have been well grown and ripened; if raised and half ripened on crowded, neglected vines, they will freeze if the apartment becomes cold, and shrivel and dry, if it is not so moist as to make them mouldy.

THE HUNTER WEEVIL.

Eds. Co. Gent.—The principal motive for writing now, is to introduce to your acquaintanceship, what to us is a new visitant, that we are desirous to get rid of. For the first time we are having our corn cut off by this ravenous bug. They are spreading rapidly, and their destructive propensities are about as marked as that of the locust. They first attack the root, girdling it above the seed and upper (lower?) roots. This causes the blade to wilt as if eaten by the cut-worm. Then they feed on the stalk. So far, my information I have gained from others—also that ashes, lime, plaster, salt, &c., have no effect on them. Can Dr. Fitch or yourself give us a remedy to arrest this pest, and thereby prevent the destruction of our corn crop? If so, do not delay doing it, as it is of vital importance to all. W. M. Beauchamp. *Skaneateles, N. Y., July* 1.

The insect from W. M. Beauchamp, Skaneateles, N. Y., is the Hunter weevil, of which we gave an account in Co. Gent. 1855, vol. v. p. 373, and again noticed August 6, 1857. I can add nothing more to these accounts.

ASA FITCH

VISIT TO CURTIS COE'S APIARY.

One of the most successful managers of bees in Western New-York, on a moderate scale, and on the old system, is **Curtis Coe** of Cayuga Co., who resides about two miles from the village of Union Springs. He has at present about a hundred and fifty hives, and derives an annual revenue from the sale of the honey, greater than most farmers raise from a hundred acres of good land. He has been in the business many years, and has derived most of his knowledge of bees and their management from his own close observation and experience. He has an additional advantage,—in not finding any particular inconvenience in being stung a dozen times or more in a day, should he chance to become mixed up with a pugnacious swarm. A brief notice of his management may be interesting and useful to the inexperienced.

He adopts a simple box-hive, with a door and pane of glass on one side, and vacancies for glass boxes above. Artificial as well as natural swarming is extensively employed. The present being an unfavorable year, the increase has been only about a dozen of each. He has employed the movable combs on a plan of his own, but has not adopted it extensively, the crooked combs rendering it inconvenient. Guide combs being always placed in his hives before the swarm is introduced, so that the combs may be made edgewise against the pane, he is enabled to inspect the operations to some extent at any time. This arrangement also enables him to secure young queens for artificial swarming, their cells being usually on the outer edges. A puff of smoke sends the bees off of these, when a long-bladed knife, reached up in the slightly raised hive from below, cuts them off, and they drop and are secured. In a few days, if taken at piping time, they come out the perfect queen.

The hiving of natural swarms is easily done. A hiving-box, consisting simply of any box holding nearly a half bushel, with one side open, is attached to a pole, as shown in Fig. 1. When the swarm comes out, the operator takes this box by its handle, the box being held over his head, and walks slowly in the midst of the flying swarm. They often alight upon it, and enter its open side. As soon as they begin doing so, it is placed in a fixed position against a fence or tree, or a crowbar hole is made by an attendant, into which the handle is inserted. When the bees have all settled, it is carried to the hive, which is standing in its proper place among the rest, and under which a temporary shelf has been placed, as shown in Fig. 2, and the bees are emptied by a slight jar upon this shelf. They immediately find their way into the hive. It is best to empty out two or three successive portions at a time; and if they do not at once find the entrance, a quill sweeps a pint or two within, when their call is sure to attract the rest.

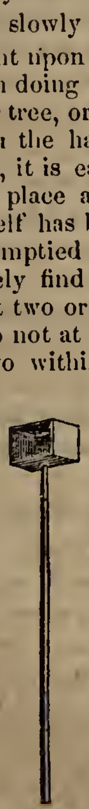

Fig. 1.

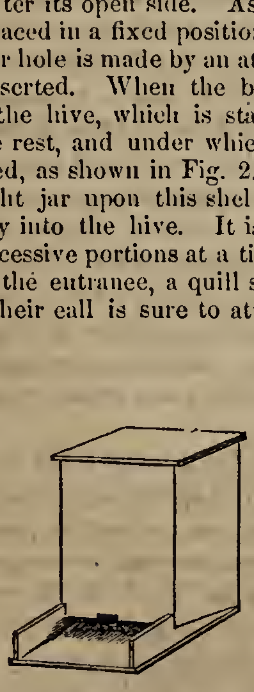

Fig. 2.

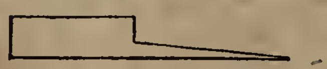

Fig. 3.

This shelf is made so as to raise the front of the hive about an inch or inch and a half high in front, and to keep the other sides closed; it consists simply of a board about twice as large as the bottom of the hive, with a board, cut as shown in fig. 3, nailed to each side. When the bees have all entered, it is withdrawn. The whole process is usually completed in a few minutes. When the swarm does not alight in the hiving-box, but on some adjacent tree, the box is held up against the spot, *as soon as they begin to cluster*, when they leave the tree and pass into the box; or if they do not, a few jars with the side of the box induces them to loosen their hold, and enter it. The operation is easily performed, and only a minute or two is occupied in their clustering. One or two boxes, with long poles for handles, are provided for such swarms as settle too high up for ordinary reach.

The loss of a newly hived swarm, occasioned by their leaving the hive, which occasionally occurs to the owners of bees, has been prevented in this apiary, so that a single loss of the kind has not occurred in twenty years. It consists in simply placing the hive flat on the bottom board for a few days, instead of raising it at the corners the third of an inch, as is always practiced with established swarms.

Four honey boxes are usually placed in each hive, in a chamber, entered by a door, in the upper part. These boxes are in the form of a cube, measuring about six or six and a half inches on each side. The top and bottom are made of half inch boards; the four sides of glass. The edges of the boards are merely rabited to receive the panes, and they are held together by strips of tin on the corners, shielding the edges of the glass, and holding every part in its place. (Fig. 4.) The strips of tin are half an inch wide and seven and a half long; they are folded longitudinally so that the two parts, each a quarter of an inch wide, stand at right angles, and thus form a corner edge of the box, and receive the edges of two panes. They are fastened to the top and bottom board, as shown in Fig. 5, the tin having a short slit in each end, so that one part overlaps the other, and a single tack secures both to the wood. These boxes are quickly made, exhibit the honey handsomely for market, and are manufactured for 18 cents each. They will hold six or eight pounds of honey in comb. As soon as they are filled, which may be determined in a moment by inspection, they are taken out and replaced by empty ones, to be filled in turn. Three holes, each an inch in diameter, in the bottom board, are bored smoothly with a bit, so as to coincide with three holes in the top board of the hive; and when they are removed, two strips of tin are pushed in under the box, one to shut the bees down into the hive, and the other to secure such as are in the honey box. One strip is taken away with the box, and the other left on the hive. The bees are easily driven out, by placing the box on another box of wood of the same size, and open only on the top, of which the honey box forms the tight cover. A slight and frequent jarring motion on the knee drives all the bees down into the dark box, where they soon cluster, and they may be emptied back on the shelf of the hive from which they were taken, or of any other hive not sufficiently supplied with bees. The middle of the day is selected to remove honey boxes, being then least occupied by bees, and especially by drones, which are the most difficult to drive out. Guide combs are placed so that the combs may be made with the edge to the eye, and a narrow stick of comb is also placed so as to extend down through the middle hole.

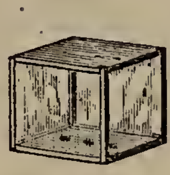

Fig. 4.

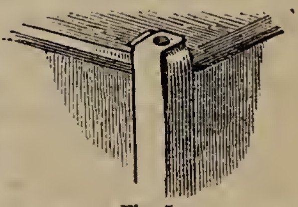

Fig. 5.

The honey being secured as soon as the boxes are full, and while the comb is yet perfectly white, commands the highest price, and has sold in the New-York market at 30 cents a pound at wholesale.

J. J. T.

FARMING IN CAYUGA COUNTY---I.

The County of Cayuga, in this State, has long stood prominent as an agricultural region. While it is not first among the counties of the State, for any prominent crop, it holds an important place for the production of wheat, barley, oats, corn, potatoes, apples, hay and buckwheat; few counties equal it in the number of horses, sheep and swine, and it exceeds three-fourths in the number of cattle. In short, the characteristics of its products are those of a mixed husbandry,—the most profitable of all farming where soil and circumstances admit. The southern half of the county is generally a strong loam, and in some portions quite clayey. It is mostly very fertile, and will yield with underdraining and good management, thirty bushels of wheat, sixty bushels of corn, seventy of oats, and two tons of hay per acre, although there are instances where 130 bushels of corn and 60 bushels of wheat per acre have been produced. The best farmers are not satisfied with less than three tons of hay, which they sometimes exceed. As a general rule, however, the crops of the majority of the farmers do not exceed 20 bushels of wheat as an average, one and a half tons of hay, and thirty or forty bushels of corn. The northern half of the county is a lighter soil, or sandy and gravelly loam; some of it needs no underdraining, but being less retentive of manure, it cannot be brought up to the extreme degree of fertility which may be given to a thoroughly drained heavy soil.

In giving the readers of this journal some imperfect sketches of farming in this county, examples will be cited that are worthy of imitation, or from which useful lessons may be learned. Medium farming may be found everywhere, and will not need any notice; while the worst specimens, or such few as exemplify shabby management, need be only briefly mentioned by way of caution, and may be alluded to at the close of these notes.

Farm of George H. Chase, Springport. This contains 150 acres, and lies two miles east of the village of Union Springs. The proprietor is one of that successful class of men, who were not brought up to agriculture, but who by bringing their energies to bear upon it, and seeking every means of information, outstrip many of their neighbors who have devoted their lives to the pursuit. He took charge of this farm when a minor, and when, as he remarked, he did not know wheat from barley. He has occupied it seven years, and during the first half of this period, made but little pecuniary gain. As a proof, however, of his present progress, his farm has doubled in market value, in consequence of the improvements in draining, buildings, &c., all of which were paid for by the products of the land. It was bought at about fifty dollars per acre, and the owner has recently received an offer of one hundred per acre.

He has laid down *fifteen miles* of tile drain, mostly within the last three years, and the results have been entirely satisfactory. As a proof of its advantages, he stated that one field of 12 acres, yielded before draining but 500 bushels of ears of corn; it was afterwards sown with barley and seeded down to wheat. While in grass, it was regularly tile-drained. The next crop was 1500 bushels of ears of corn, 120 of potatoes, 60 wagon loads of pumpkins, and 33 loads of stalks.

He has fully proved the advantages of heavy seeding to grass. A meadow of 16 acres was partly cut when visited; 14 loads of hay had already been drawn, with apparently very little impression made upon it—he estimates the crop at 3 tons per acre, but it will doubtless exceed it. This field was seeded two years ago with a peck each of timothy, red top, and clover, per acre, or three pecks in all. He has in some instances used a bushel of seed per acre to great advantage. Adjoining this meadow, was a 22 acre field of barley, the first crop of this grain since it was tile drained. His barley has commonly averaged 30 bushels per acre, but this is much heavier; from the appearance of the ripening field, it would doubtless yield from 35 to 40 bushels.

The hay is cut with a two horse machine, raked with a horse, and pitched into the barn by means of a horse-fork—thus rendering the whole expense of securing the crop comparatively small. The roadway to his barn not being quite completed, he pitches the hay through a door at one end, the bottom of which is 25 feet from the ground below, requiring lifting of the hay over 30 feet; yet so rapid is this mode of unloading, that 22 two-horse loads were thus passed through this door in half a day, from successive wagons. As soon as the load is drawn to its place, the horses are taken from the wagon by simply withdrawing the bolt, and attached to the rope which elevates the hay. The load is discharged in a few minutes, when the horses are returned to the wagon, and pass off for another load. This mode is familiar to some of our readers, but is mentioned as another proof of the labor-saving character of the horse fork.

The winter feeding of cattle has proved one of the most profitable departments of farming. They are not stabled, but are allowed to run loose in a large covered shed, formed of the basement of the principal barn. This basement is high, and extends under the whole building, and is kept perfectly clean by litter. It fronts a yard which is entirely sheltered from winds by side buildings. Special care is taken to avoid crevices through which wintery winds may find their way, the proprietor regarding these partial currents as one cause why the system of shelter is in so poor repute with some slip-shod farmers. A platform scale is placed easily accessible to the yard. The cattle are often weighed, and experiments have been freely made to test the best system of feeding. Hundreds of dollars have been already saved by the knowledge which the weighing of animals under the different modes of management has imparted. A single example may be given: A fine steer feed daily with four quarts of barley meal in addition to his fodder, was found to gain regularly 18 pounds per week. A neighbor urged the proprietor to "push him," that is, to feed much higher, in order to see what might be accomplished by way of increase. Eight quarts per day were accordingly given him, when the increase immediately became less, and on giving twelve quarts *he gained nothing!* Moderate feeding is therefore found most profitable in every respect, by maintaining a healthy digestion.

About fifty head of cattle were fed last winter, and were sold early in spring, at an advance of twenty dollars per head over the price when purchased late in autumn, besides furnishing manure enough for thirty acres.

Farms of E. T. T. Martin, Esq., and of Ex-Gov. Throop of Owasco. The former of these consists of several hundred acres, mostly farmed to the shares, but under the eye of the proprietor, who is chiefly occupied with other business. One of the first things that strikes the eye, is the neatness of the public highways, the road-tax being paid in money, but enough reserved to pay for mowing all the weeds, and keeping the whole in proper condition. Tile-draining is extensively adopted, and in addition to placing tile in the ditches, they are half filled with the refuse stone of the fields. Post and board fences are employed throughout; the cost, including materials, being about $1.12 per rod. Hemlock boards and swamp white oak posts are preferred; and the average period of their duration, when well made, is about twenty-five years. As soon as the boards begin to loosen from the posts by decay, which is usually not much sooner than twenty years, upright battens are nailed upon them, which makes them good five or six years longer. Battens are not allowed until this period, as they would increase the tendency to decay. Some fences of this kind, made twenty years ago, presented a good substantial appearance.

The proprietor has given some attention to hedging, for garden screens. The privet, which had stood and formed handsome hedges for forty years, has been destroyed by the late severe winters. Buckthorn has been successfully substituted. The English hawthorn did well till it became covered with the wooly aphis. To destroy this insect, the whole was cut cown to within a few inches of the ground, and burned. The stumps were whitewashed to destroy the remainder, (soap would perhaps have been better,) and are now sending up a thick growth for a young hedge, the insect having disappeared.

The residence of E. T. T. Martin is built in the Italian style, and is surrounded by extensive ornamental grounds, laid out and planted with admirable skill, and kept in finished order. The view from the library window is surpassingly beautiful,—embracing a smoothly shaven slightly undulating lawn of several acres, bordered on one side with a fine ornamental garden and trees, on the other by the picturesque forms of old willows, elms, &c., possessing an exceedingly rich combination of foliage, beyond which was the curved outlines of grain fields and more distant woods on one side, and the blue waters of Owaseo lake on the other.

A drive of half a mile through the lawn, among groups of trees, and along the margin of the lake, brought us to the residence of Ex-Gov. Throop, whom we found in the activity of full health, devoting his time now in advanced years, to agriculture and gardening, in both of which he is very successful. His farm contains over a hundred acres. He showed us a fine field of Soules wheat, which would probably yield thirty bushels to the acre, uninjured by the midge. This insect appears to be passing away, and now scarcely touches good fields of grain on *oak* land, the strongest wheat soil, although it does some damage to crops on beech and maple land, which are second in quality for this grain.

The drive from the public road to Gov. Throop's mansion, is through a plantation of trees, set out only fifteen years since, but now forming a finely shaded carriage road, over which the branches meet. The belt through which it passes is only three or four rods wide, but it forms perfect seclusion from the adjacent fields. Some of the silver maples measured 14 inches in diameter, and a European plane tree 16 inches—indicating a rapid growth for this short period. When small, the ground was kept well cultivated with potatoes and other low hoed crops for several years, among these trees, until they became vigorous and well established. Neglected, as many are, they would have been at the present time but little larger than when set out.

On the farm is one of the finest plantations of ornamental trees to be anywhere met with, standing on an elevated piece of land, and commanding a beautiful and extensive view of the lake and surrounding country. It would afford an admirable site for a fine residence, the trees being already on the ground. This fine plantation was procured in a very simple manner. The wood which formerly covered it was sold for fuel, standing, at $40 per acre, and all trees less than ten inches in diameter were reserved. This was the whole process—they have now thickened and spread their broad branches, and form fine park trees.

Considerable attention has been given to hedges, and differents plants for this purpose have been tried. The English hawthorn has succeeded well, but on account of the disasters to which it has been liable elsewhere it is not regarded as reliable. The Washington thorn has done still better. Gov. Throop thinks well of the native crab apple, and had some hedge planted with it. The seed was procured from a native tree growing near an orchard, and as a consequence they were hybridized, and the hedge shows among some of the trees strong indications of this mixture. The climate is too severe for the success of the Osage orange, and it has been discarded. The Buckthorn is preferred to all others. A very fine hedge of this plant set three years ago, now in its fourth summer, was three feet and a half high, and over four feet wide at the bottom, trained with sloping sides to a peak, and the interior stiff and dense. The plants were placed 15 inches apart, to which, with good culture, and proper cutting, is ascribed the vigor and success of this hedge,—crowding the plants to within a few inches of each other being deemed detrimental to their best growth.

In the kitchen garden were nearly full grown water melons and musk melons, which, for so early a period in the season, (before wheat harvest,) may be regarded as excellent success. They were planted in the hot-bed, and when the other plants were taken out the earth was supplied around them. The hot-bed, being made in a pit, they now occupy merely a mound. Beneath them there are about two feet of forest leaves, two feet more of manure, and eight inches of earth. J. J. T.

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[For the Country Gentleman and Cultivator.]

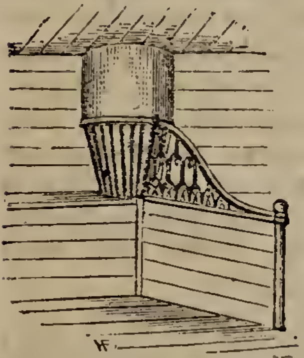
BLIND DRAINS.

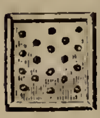
As there has been so much said in favor of blind draining, I don't know as it is of any use to say more; but in passing a field, and to see here and there an eye-sore, a wet springy spot that is necessarily left unplowed, and producing mere nothing, I think the owner needs draining preached to him still. It is the panacea for wet or dry weather. I plowed some naturally wet land last May, that had been blind drained, which was as mellow as a person could wish, while most of the soil, not artificially drained, was filled with water, and not fit to work. I had occasion to dig through a drain last week that had been put down in September, 1854, for the purpose of giving an outlet for some water coming out higher than the ditch. The grass looked much more luxuriant as we neared the drain; in digging down *found the roots of the grass extending down to the tile, two and a half feet from the surface, while three rods from the drain you could distinguish no roots of grass more than ten inches.* You can get larger crops of any kind where the roots have a chance to extend, than to be confined near the surface to keep out of the cold spring water. It deepens your soil and enlarges your crop. I find it pays. Tom.

Sketches of Seneca County Farming

In a recent short tour through Seneca County and a small portion of Ontario County, in this State, during which I visited some of the best farmers, so many objects of interest were observed that I am induced to furnish a brief sketch of the journey for the readers of the COUNTRY GENTLEMAN. The enterprising exertions of the late JOHN DELAFIELD, and the practical labors of JOHN JOHNSTON, who, as is well known, long since introduced and carried out an admirable system of husbandry, aided by others, have rendered this beautiful and fertile lake region one of the finest and most interesting portions of the country.

One of the most thorough and successful farmers of the county is JOSEPH WRIGHT of Waterloo—which is the more worthy of note when it is borne in mind, that the cultivation of the soil is not his principal occupation, but rather an appendage to his business. His residence is in the village, and is immediately surrounded with ornamental planting and provisions for the luxuries of fruits, (among which is a fine cold grapery just beginning to afford ample supplies,) and the conveniences of nearly perfect out-buildings. His spacious carriage house and stables are models of neatness and elegance. The accompanying sketch furnishes a very imperfect representation of the partitions of his horse stalls, and the cast-iron rack and manger. The stable is 15 feet wide, and the ceiling is 12 feet high; the hay passes down from the hay loft above through the semi-cylindrical iron opening, 4 feet wide, directly into the feeding rack, which is 3 feet high, and 4 feet wide at the top and 2 feet at bottom, and supplies two stalls. Cast-iron posts receiving horizontal plank form the partitions, which are surmounted or capped with a strong and ornamental cast frame. The cast-iron manger is 15 inches wide. Drainage in each stall is effected through a perforated cast plate, slightly concave, one foot square, set in the floor, as shown in the figure. The whole is kept nearly as neat as a parlor.





J. Wright cultivates about 260 acres of land in three portions or farms; one of 80 acres north of the village; another, known as "Peck Slip," of 25 acres, on the western side; and the third, his principal farm, of 150 acres, a mile or two distant, on the southeast side, and known as "Silver Creek" farm. The Peck Slip farm is sandy soil, a large part reclaimed from scattered bogs by filling in and by through underdraining, and it has been made highly fertile by manuring. Corn is raised on this soil with great success; the large Dent variety, such as is cultivated in central and southern Ohio, has been chosen for this purpose, obtained from the neighborhood of Columbus, and selected for its compact ear and small cob. This variety would not succeed on common land, but on this soil it has never failed to ripen, even when planted quite late. A crop of several acres now presents a luxuriance of growth scarcely ever equalled. If there was any equal to it in Ohio or Indiana last year, I did not see it in my journey through those States. The hills are planted 3½ by 4 feet apart, yet the leaves fill the space so that the eye can see but few feet distant between the rows. It was not yet in tassel, but averaged in many places 9 or 10 feet high, and one stalk, not much above the rest, measured, as it stood, 11 feet high. It will probably be 16 feet high when matured. The crop is estimated at 100 bushels per acre. This sort has yielded here 213 bushels of ears; a bushel and a half of heaped measure has given when shelled a rounded bushel of the grain—great pains having been taken in selecting the seed in Ohio, with a view to a small cob and a heavy covering of grain. It is thought to yield more on this land than the smaller sorts, and still more largely of fodder. The stalks are cut for feeding by steam power, by means of a large machine, which cuts and tears to pieces between toothed cylinders so that yearling colts will freely eat these large and coarse stalks. This machine is manufactured at Harrisburgh, Pa., and is quite similar in its operation to Hickok's cutter, which I have used to equal advantage.

A single bin, holding about 30 tons of feed, is used for storing meal, shorts, &c., whenever they may be purchased cheaply.

The fertility of the kitchen garden on this farm, was shown by a small plantation of horse radish of one or two square rods, which was set out last spring, the leaves now forming a dense even growth covering the whole surface two feet nine inches high. Dwarf pear trees have been cultivated successfully for about twelve years, and have borne abundantly until the present year of general failure. Peach trees grow too luxuriantly; for after bearing some years, and being treated in the best manner of shortening in, they were destroyed by the late severe winter. On less fertile soil, they have survived. The same remark applies to grapes—those on dry knolls, where the soil is not so rich, were not injured last winter, while others of more succulent growth were destroyed. The Osage orange has proved successful for hedges, and formed an impassable barrier around the gardens and orchards. The buckthorn has also been used, and forms a handsomer screen, but not so efficient a hedge for the farm.

The Silver Creek farm of 150 acres, is devoted to general mixed husbandry, consists of strong heavy loam, is clean and well fenced, and produces fine crops. Fifteen hundred loads of swamp muck were drawn last year into the barn-yard, and a part of it having become well mixed with manure, has been drawn out. The remainder has been left for another season, the muck being better to remain a year or two. Tile draining has been extensively practiced; and some portions of the farm that produced only coarse grass and skunk cabbage, have become valuable and productive. One of the drains has been laid with tile of *one foot* orifice, a large stream at some seasons nearly filling it, and being let into it through a grate and bed of stones. A vineyard of ten acres, three years old, the land regularly tiled 20 feet apart, already bears some fine fruit, and gives promise of great success. The vines are planted 12 feet apart each way, and five perpendicular stakes are to sustain each when fully grown—five vertical canes, from horizontal arms, being grown to each vine, and a stake provided for each cane. Three stakes had already been inserted and the rest are to be added another year. The renewal system is to be adopted. The heavy loam, devoted to this vineyard, is found decidedly better than the sandy or light soil on the other side of the village.

A very neat brick dairy on this farm, is worthy of a passing notice. The pans are set on frames or racks and the temperature controlled by means of a large chest filled with ice, drainage from which is effected through a lead pipe. There is a large ceiling ventilator, and wire gauze screens at the windows. Among the animals were some fine pigs, a cross between the Chester Whites and imported Yorkshires. They were about two months old, and would weigh nearly a hundred pounds—the manager insisted, perhaps rather extravagantly, that they would come up to 700 lbs., when fully grown. The want of time prevented me trom seeing the cattle, which are mostly grade Short-Horns and some full bloods. A large portion of the business of the farm is raising road-horses—of which there are about ninety head in all, only a part being kept here. The stallion *Ratler* is a superb animal, and there are some young animals of high promise.

From Waterloo, a ride of a few miles brought me to John Johnston's, on the banks of Seneca Lake. He has over 100 acres left, after the sale of most of his farm. The readers of the Country Gentleman are already familiar with his great success as a farmer, and little need be added here. His fences are post and board, the posts being "second growth" chestnut. Some have stood 22 years. The original trees of the chestnut are of little value. He intends to adopt the plan of doing most of his plowing with three horses—being so near the plow they work to great advantage and efficiency. His tiles, which were choked by the roots of the black walnut and other trees, even when some rods off, have never been injured by the roots of the apple orchard, among which they were laid fifteen years ago, and he infers that no damage need be feared from orchards. He possesses some admirable grade cattle, among them a steer, a cross of the Hereford and Short-Horn, four year old, and weighing 2,500 lbs. He was gratified to hear of the experiment in feeding mentioned in the recent report of G. H. Chase's farming in the Country Gentleman, where accurate weighing and measuring showed a more rapid gain from moderate than high feeding. Accompanying me over the adjoining farm of Robert J. Swan, so many objects of interest were observed that a brief notice cannot fail to be interesting, although the proprietor is averse to public notice. The farm contains 350 acres—all has been regularly tile drained—and for neatness of appearance, combined with high productiveness, there are few to equal it. The fences are all made of posts and boards; the barns and out-buildings are extensive, complete, and well finished and painted. From the top of the mansion a magnificent view is obtained of Seneca Lake and a wide territory of fertile country. A field of wheat, just cut and shocked, was shown me, containing 20 acres, the land formerly so wet from numerous swales that it could not be easily traversed in spring with horses, but which, having been tile-drained, the present crop is estimated by John Johnston at over 30 bushels per acre. It is Soule wheat, and appears to be entirely free from the midge. A fine field of oats, nearly ripe, was estimated at 70 bushels per acre.

Two teams with three wagons were drawing in wheat from another field, so that one wagon successively stood with its load in the barn, the grain being pitched off at once to the thrashing machine, which was driven by eight horses, and was thus kept constantly running. About 500 bushels were thus thrashed in a day, and one transfer by pitching saved. The owner prefers the beauty of some shade trees, to the slightly increased profit of being entirely destitute of them in his meadows and pastures. Several large and broad black walnuts had nearly destroyed the clover as far as their roots had extended on either side,—showing two or three important facts worthy of the observation of orchardists. First, that the depth of clover-roots causes this crop to interfere badly with the roots of trees, and the two cannot grow well together; in the present instance the walnut proved the stronger. Secondly, that roots extend much further than some writers have indicated; the radiating streaks, bare of clover, measuring from the trunk on each side, about as far as the height of the tree, or with a diameter about double its height, and far beyond the spread of the branches. This shows the absolute necessity of broadcast cultivation of trees.

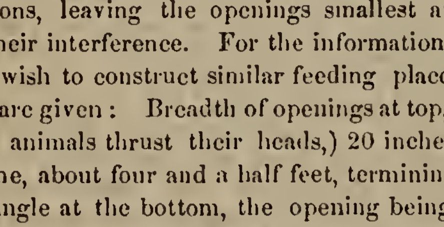
On the other side of the lake, nearly opposite, I called at George Stone's, who has occupied a small farm of about 60 acres for a few years. He has built a fine mansion, and remarkably neat and tasteful barns. He has reclaimed two pieces of land and put them in grass, one of which yielded about 2½ tons of hay per acre the present year, and the other slightly over three tons per acre. A field of 12 acres, occupied with a crop of white wheat, was estimated by John Johnston at over 30 bushels per acre. Until within a year or two, it had been regarded as nearly waste land, and was so unproductive as to be thrown open as common. It was thoroughly tile-drained, limed with 75 bushels per acre, and sowed with wheat, and this heavy crop was the result.

Two miles westwardly from George Stone's, is the beautiful and extensive farm of James O. Sheldon—formerly occupied by Gideon Lee. It is entered on the east by a private road, which passes across a fine, broad, rich valley, through the center of the farm, a half mile or more to the residence. The fields are occasionally interspersed with roadb spreading stately elms, and other trees. The low afternoon sun gave them a peculiarly rich coloring of light and shade. The proprietor is widely known as possessing one of the finest and most extensive herds of Short-Horns in the country. The cultivation of the 300 acre farm is a secondary object. The stables and farm-buildings are extensive, commodious, and highly finished; the principal one in which the finest cattle are kept, is about 150 feet long, and has an airy and elegant appearance within, rarely equalled in such buildings. The herd of Short-Horns is now over 50 head, and consists of many admirable selections. The imported Grand Duke of Oxford appears to be a perfect animal—he weighs now 2,700 lbs. There are about ten head of fine Alderneys. From all his animals he manufactures about 1,200 loads of manure annually; it is wheeled from the stables to a hollow or broad shallow pit at one side of the yard, and with the copious litter used, forms by decay excellent manure. The water from the eaves is kept from it; and the direct fall of rain on the heap is not more than is required for a proper degree of moisture and natural evaporation. Each barn has such a heap; and being placed at one side, does not at all interfere with the neatness which characterizes the barn-yards, which are smoothly gravelled over their whole surface, and kept in finished order. The crops are generally quite good; a field of 11 acres of white wheat, just cut, has been scarcely equalled, different farmers of experience having estimated the crop at 40 bushels per acre. The land was tile-drained. The fish ponds, one of an acre and the other half an acre, supplied by a copious stream, contain an abundance of fish, but no estimate has been made of the amount they will furnish the family—which I was informed is much diminished by the larger preying on the smaller. Would not the introduction of some of the smaller kinds, which increase rapidly, assist in the supply of their food?

H. T. E. Foster's farm of 230 acres is handsomely situated on the east side of Seneca lake, in Seneca County, six miles southwardly from Geneva. It extends with a gentle slope down to the banks of the lake, which is here two or three miles wide, and the rich fields, trees lining the margin, the expanse of water, and the rich country in Ontario, like a picture in the distance, all render the locality one of great beauty. The farm is fenced neatly with posts and boards, and the whole has a clean and finished appearance. The crops are good, but not equal to those observed on some other farms. The land is not regularly drained, but only the wetter portions.

The importance of sowing grass seed early, was shown by two portions of the same field, one of which was seeded on wheat very early in spring, and which presented a dense and even growth of grass; the other, sown later on barley, and marked with numerous bare patches.

Very fine grade animals are raised on the farm ; I never saw more perfect half blood Durhams than a young herd from fine native cows and a full-blood bull bought of R. A. Alexander. Twenty-six head of cattle are kept, and about 270 head of sheep ; and about 600 loads of manure are made annually. The buildings for winter shelter are ample ; spacious protection is provided in different apartments for the sheep, and one for the lambs, of which none are lost. The amount of fresh air they may receive is easily controlled by folding horizontal doors. In the apartment for feeding calves they eat from a common manger, but vertical divisions, leaving the openings smallest at bottom, prevent their interference. For the information of others who may wish to construct similar feeding places, the dimensions are given : Breadth of openings at top, (through which the animals thrust their heads,) 20 inches ; height of the same, about four and a half feet, termininating at a point or angle at the bottom, the opening being in form like the letter V. The spaces between are boarded up about two feet, and a ring placed about 20 inches high, to which to fasten them if desired. Fattening cattle are allowed the run of a sheltered yard, except when feeding, when they are shut in the stalls, with swinging gates to separate them. Cows are attached to the mangers by means of a chain fastened around the neck with a cross bar and ring. A ring at the other end of the chain slides up and down about one foot on a vertical iron rod, in the form of a long staple, allowing each animal to rise and lie down with facility. A gutter or depression below the floor one foot wide, and five inches deep, receives all the droppings for the day when they are thus kept to their places by chains ; and the bottom of the gutter being flat, all is easily shovelled out with a square shovel. Water is brought to the animals in four separate yards by a pipe pouring into one trough, by an arrangement as shown in the annexed diagram.



a. a. a. a., four different portions of trough—b., fence—c. c. c. c. the four yards.

The granary consists of several bins holding 300 bushels each, and the floor is about 5 feet above the ground outside, where a door opens, and through which a wagon may be loaded with grain without lifting.

Leaving this farm, a drive of twelve miles along the banks of Seneca lake, with its broad sheet of water on the right, and fertile farms on the left—the banks often handsomely lined with oak trees, under the wide branches of which, and between the scattered masses of red cedars, the blue waters were partly seen—and over a road badly made of excellent materials, with some rickety decayed bridges, brought me to Ovid landing, the foot of the State Agricultural College farm. This farm, as many readers of this journal know, contains about 700 acres, and is two and a half miles long, the college buildings being placed about the centre. Like the whole southern portion of the county of Seneca, it is a strong loam, with high natural fertility, and although it may vary somewhat in different parts, does not possess the several distinct kinds of soil, which some have supposed. It is in a good state of cultivation, and was covered with abundant crops of grain and grass, on which the mowers and reapers were at work. The head farmer receives a salary, and hires about eight men to do the work, besides some assistance from the students. Most of the products are consumed by the institution. Besides young cattle, there are 28 milch cows, which are milked by four students, (who thus pay in part their expenses,) and the cream is churned by them.

But one wing of the college buildings has been erected, but is sufficient to afford accommodations for 150 students. Its cost was between 40 and 50,000 dollars. It is most substantially built of brick, with stone basement and slate roof, the brick, stone and lime being supplied from the college farm. It has an imposing and fine architectural appearance. The view of the surrounding country is magnificent. The interior of the college is spacious and commodious in every part. The sleeping apartments are rarely equalled ; each bed-room lodges two students, in separate beds; and attached to each room is a parlor or sitting room about 15 feet square. All are warmed in winter by means of Chilson's furnaces, and ventilation is well attended to. The number of students last winter,—the opening term—was about twenty; the present number between thirty and forty. If there were fifty, the institution would pay its present expenses. Three Professors are employed. The course consists of the Mathematical and Natural Sciences, and their application to Agriculture ; the languages, ancient and modern, are not taught; although some of them obtained elsewhere, would assist in the acquirement of the sciences. The students all pursue practical labors one hour each day, in becoming familiar with tools and machines, and farm operations generally. It is the aim of the managers to make them acquainted with all the best farm machinery of late introduction. The chemical laboratory is worthy of particular notice, being a model for neatness and convenience. The apparatus for analysis is of great excellence, most of it being imported by Prof. Kimball from Germany ; a balance of extraordinary delicacy (the usual price of which is $100) was made in New York. In the adjoining library, I observed many French and German, as well as English standard works on this science. On the whole I was much pleased with the college and the manner in which it is conducted, although it is unfinished in many respects; and it is doubtless doing much good, and would become eminently useful if some $200,000 or more could be added to its capital. The present disastrous war prevents this addition, lessens the number of students, and withdraws in part, the valuable superintendence of its excellent President, M. R. Patrick. If the buildings were completed, and a fund large enough added to secure its safe running, independent of temporary contingencies, it would be, in connection with its large and fertile farm, a magnificent and successful establishment.

The southern part of Seneca County maintains a high reputation for successful agriculture. From Ovid Landing on Seneca lake, to Kidder's Ferry on the Cayuga, I observed an almost continuous succession of fine farms. **Wm. Kinne**, near Ovid village, has 206 acres, which he has mostly paid for by the crops formerly raised upon it. Draining has been extensively practiced. The proprietor stated that with the assistance of the ditching plow to loosen the subsoil, which is then thrown out by shovels, he has been enabled to cut drains two feet and a half deep for *eight cents a rod*, and that he regards it a great saver of labor. A field of thirteen acres of Soule wheat I have scarcely seen surpassed; he estimated it at 35 bushels per acre. Another field of Canada Club spring wheat was turning yellow, and will afford a large product. He prefers this to the China Tea wheat—the latter is however more generally sown, and many crops of unusually fine appearance were observed through the County. A large field of corn on this farm promises about 70 bushels per acre. It is scarcely needless to add that the owner admitted that "farming pays."

In the same neighborhood is the fine farm of **Hugh Chapman**, containing 177 acres. On this farm over $4,000 were expended in tile draining. The fences are chiefly of rails and vertical stakes, secured by caps or wire. The whole had a neat and well cultivated appearance. The crops were equal to those on the farm of Wm. Kinne. A superb field of oats, standing erect and nearly ripe, was estimated at 100 bushels per acre, a frequent product. A fine stock of road horses is raised on this farm, but the owner thinks grain raising the most profitable part of husbandry.

Calling at the residence of **John V. Grove**, near Cayuga lake, in this town, he was unfortunately absent. The appearance of his crops indicated very evidently that he makes farming profitable. He has about 230 acres, and I was informed he cleared $2,000 from the farm last year. The fences are rails and vertical stakes, coupled by caps bored by means of machinery. This farm took the first premium of the State Agricultural Society in 1855, and a full account is given in the Transactions for that year, by which it appears that the owner's nett profits were $1,100, after deducting full interest on the farm, taxes, store bills, and the whole amount of personal services of himself and several members of his family. The account as I have summed it up stood as follows:—

EXPENSES.—Labor, including that of hired man, of himself, wife, and that of his sons and daughters, at full price,		$1,106.15
Stock bought for fattening,		1,927.00
Interest on land, at $100 per acre,		1,641.50
Seed, mechanics' and store bills, and other expenditures,		958.42
		$5,633.07
RECEIPTS.		
Various crops, &c.,	$4,181.07	
Sales of stock,	2,571.82	
		6,752.89
Nett profit for the year,		$1,119.82

J. J. T.

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Propagation of Fish.—It is said that the artificial propagation of fish has proved a complete success in Europe; the Tay breeding boxes, established in 1857, turn out 500,000 young salmon every year. The Irish breeding places have also succeeded admirably. The artificial lake at Huningue, near Basle, covering seventy acres, is doing much to re-people the exhausted rivers of France with fish.

Baron v. Liebig on the Action of Peruvian Guano.

Communicated, with Remarks, by Prof. S. W. Johnson, to the Country Gentleman.

The mere chemical dilettante might suppose that so soon as we know the composition of a manure, we have all the needful data necessary to pronounce upon its fertilizing action. There can be no greater mistake. It is true that agricultural chemists have based calculations of the value of fertilizers on their content of ammonia, phosphoric acid, potash, &c.; but this has been done only with reference to the commercial worth—the price of the manure. Even then the emphatic assurance has been given that such estimates are only roughly approximate, and of use simply to aid the farmer in expending his money judiciously, and compelling dealers in manures to maintain a certain standard of quality in their wares.

No one has ever had grounds for supposing that the composition of a manure can serve to predict the effects that will follow or accompany its use. We know, indeed, from the general experience of agriculturists, and especially from the exact researches of Boussingault and other chemists, that ammonia, nitric acid, phosphoric acid, potash, sulphates, &c., are indispensable to the growth of plants. We know, too, that the three or four first named substances are most commonly deficient in poor or long-cropped soils, and that, as a consequence, the fertilizers that are most generally useful, must contain these ingredients. We hence assert, in a general way, that these are the most important fertilizing matters, and with the better reason, since their commercial value in the forms which are agriculturally useful, is far greater than that of the other constituents of vegetation.

When, however, we read that two manures of different origin and external character, yield on analysis the same per centages of nitrogen, (ammonia or nitric acid,) phosphoric acid, potash, &c., are we not warranted in assuming that their fertilizing action will be the same? By no means, must be the emphatic answer.

The condition or form of combinations of the elements of a manure, is of the utmost importance in determining its value and effects. Next to the presence of essential ingredients, the most important character to be regarded in a manure, is the fact of solubility. Insolubility is synonymous with barrenness in the soil, with inactivity in a manure.

The treatment of bones and natural phosphates with oil of vitriol, the fermentation of animal manures, the weathering of swamp-muck, are processes whose utility consists chiefly, if not entirely, in rendering soluble the ingredients originally present in these matters.

Where various substances are brought together in intimate contact, it happens in very many cases that remarkable changes occur. These are chiefly chemical, i. e., they have reference to the *composition* of the mixture—they depend upon the presence of *different kinds* of matter, which are naturally endowed with various and contending affinities. The *reactions*—for thus the chemist designates the chemical transformations which take place when bodies act and act again, or *re-act* on each other—have a wide-spread and powerful influence in determining agricultural results. The atmosphere, the soil, and the manure-heap, are not mere magazines of inert matter, but are the theatres of perpetual chemical changes.

To know accurately the kind of matter existing in a given soil or fertiliser, and to know fully the properties of each ingredient when apart from all others, is to know very little of the true characters of the mixture. The *mutual relations* of the elements of an earth or manure, the *reactions* of which they are susceptible, the conditions needful to produce or arrest this or that chemical change, these are the facts a knowledge of which constitutes an understanding of the subject. To comprehend them in their various bearings, is not merely a work of memory and casual observation, but one that requires thought and study. To increase our knowledge of these profounder truths of agriculture is the province of a few, endowed with a far-reaching insight, that penetrates the obscurest nooks of nature, geniuses whose clear eyes illuminate the darkness they desire to explore, centres and creators of intellectual light, the track of whose thoughts is a-glow with beautiful revelations.

It is a deep pleasure to be fed from the inspiration of such minds. It is no less a satisfaction to be the almoner of their gifts to the world.

Baron Liebig, in a private communication dated the 15th June, describes the result of some new researches he has been making with reference to the character and action of Peruvian guano. He says: "The German agriculturists assert that a given weight of guano has greater fertilizing effect than an artificial mixture which contains the same quantity of phosphate of lime and of nitrogen (in the form of ammonia-salts,) and since, according to experiments which I have made, no decidedly striking influence can be ascribed to the uric acid, which is a considerable ingredient of guano, I have subjected several sorts of Peruvian guano to investigation.

If Peruvian guano be diffused in water, then thrown on a filter and immediately washed out, a dark brown solution is obtained, which by evaporation yields a large amount (8–10 *per cent*) of crystallized oxalate of ammonia. The mother liquor contains a small quantity of phosphates of potash and ammonia, the phosphoric acid, amounting to 2–3 *per cent.* When, however, the guano and water are allowed to stand in contact for several days, a totally different result is attained. If after such prolonged action the guano be washed out with water, a solution is procured in which the quantity of phosphoric is nearly twice as great as in the former case, (4–5 *per cent*,) and in which the amount of oxalic acid is correspondingly diminished.

These facts demonstrate that in Peruvian guano, in presence of moisture, there proceeds a gradual decomposition of the bone-phosphate of lime by means of the oxalate of ammonia, whereby oxalate of lime and phosphate of ammonia are formed.

I find that the longer the action of moisture continues, the more phosphoric acid passes from the comparatively insoluble form of bone-phosphate of lime into the readily soluble phosphate of ammonia, or so long as oxalate of ammonia remains in the guano. The exchange of acids and bases proceed rapidly at first, but afterward more slowly.

I was astonished to find that an artificial mixture of phosphate of lime with oxalate of ammonia moistened with water, undergoes scarcely any similar decomposition. On adding, however, a little sulphate of ammonia to the mixture, the change is rapidly accomplished. In guano there exists sulphate of ammonia to the extent of 3–4 per cent., and there can be no doubt that the decomposition of the phosphate of lime is brought about by the presence of this salt, *in which the phosphate itself is slightly soluble.*

When the circumstances are most favorable, the phosphates of Peruvian guano do not act as ordinary phosphates; but they operate in all respects identically with the superphosphates. The guano itself is in fact a most remarkable substance.

The solution of the phosphoric acid of guano in the soil, obviously depends to a great extent upon the weather. Heavy rains immediately following the application of guano, operate unfavorably to its good effects, because they wash out the guano and separate from the phosphate of lime the oxalate of ammonia, which serves to render its phosphoric acid soluble. Gentle and continued showers, which soak but do not leach the guano, favor its action by furnishing the conditions for transmuting its phosphates into super-phosphates.

I have discovered a very simple means of making the action of guano constant, so far as the solution of its phosphoric acid is concerned. It consists in this: one or two days before it is used, the guano is moistened with water which has been rendered slightly but decidedly sour, by addition of a little sulphuric or muriatic acid. After this treatment the formation of phosphate of ammonia proceeds with great rapidity, and is complete in a few hours. The guano thus moistened and left to itself for the prescribed time, is found to contain, according to the amount of oxalate of ammonia originally present, from 8–11 *per cent* of soluble phosphoric acid (in form of phosphate of ammonia,) while all the oxalic acid has entered into insoluble combination with the lime.

This procedure may be in many cases useful and welcome to the rational agriculturist."

Analytical Laboratory of the Sheffield Scientific School,
Yale College, July, 1861.

Quantity of Cheese Per Gallon of Milk.

In the January number of the Dairy Farmer, the following rule for cheese making are given:

"1st. To ascertain how much cheese you ought to get from your milk—multiply the number of pounds of milk by eleven—point off two figures for decimals, and the product is pounds and decimals of a pound of cheese direct from the press."

No rule will answer for all dairies, as the amount of cheese made from a given quantity of milk will depend upon the richness of the milk, the time of year, and the skill in manufacture. This is shown very clearly by the following abstract made from my dairy register: In 1857 my cheese was made in a tub, with a dairy stove for heating, tin curd cutter, &c. The average yield of cheese and shrinkage for the different months was as follows:

	Cheese per gallon* weighed from press.	Per cent of shrinkage in 30 days.	Cheese per gallon when cured 30 days.
May,	1.11 pounds.	.08	1.03 pounds.
June,	1.11 do.	.10	1.00 do.
July,	1.13 do.	.12	1.00 do.
August,	1.17 do.	.06	1.10 do.
September,	1.19 do.	.03	1.15 do.
October,	1.28 do.	.03	1.24 do.
November,	1.29 do.	.04	1.24 do.

In the season of 1860 my cheese was made in an improved vat, in which heat was uniformly and moderately applied, and under perfect control. A dairy knife was used for cutting the curd, and the whole process conducted with more knowledge of the art than in 1857. Circumstances prevented my keeping a record for the entire season—what record was kept shows an increased yield:

The av. yield per gal. in May, from the 10th to 31st was...... 1.22 lbs.
do. do. June for the entire month was...... 1.22 "
do. do. for 10 days in July, 1st to 11h, was,. 1.21 "
do. do. for 5 days in November was,........ 1.42 "

These results show the importance of skill and the best apparatus in the manufacture of cheese. The increased yield in my dairy from those causes as above shown, is over ten percent on the whole amount made. The quality improves with the quantity, as the increase is principally in the amount of oil or butter worked in. In 1857 much more whey butter was made than was required in oil-cheese. In 1860 extra attention was necessary in order to get whey butter sufficient to oil the cheese properly.

Milk weighs ten pounds to the gallon—by the above rule one gallon of milk would yield 1.10 pounds of cheese. Thus 10 lbs. by 11=110, two places pointed off for decimals make it 1.10 lbs., a result which would not be near correct except in a few cases. The true plan is for every dairyman to make his own rule—make a scale or rule by which he can tell the quantity of milk used for each cheese at a glance—record the amount on a piece of paper or book kept for the purpose—weigh his cheese when it comes from the press, and put the weight down on his record, and at the expiration of the season, or at any time, he can compute and see what yield he is getting. If he records the process of manufacture and the quantity of cheese when cured, he can ascertain what the causes are that produce particular results in cheese making.—*Dairy Farmer.*

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* Beer measure.

☞ About *two thousand* Mowing, or combined Reaping and Mowing Machines, of a single American Patent—all made, we believe, in this country—are now said to have been put in operation in Great Britain, with complete success.

[For the Country Gentleman and Cultivator.]

PLAN OF A CHESTER COUNTY BARN.

[The following plan is of one of the best and most complete barns that has ever been forwarded to us. It is a three story barn, and of course must be placed on a sidehill—an ascent of ten feet from the lower to the upper side will answer. The grain, hay, &c., being all drawn on the upper floor, there is scarcely any upward pitching. There are many other conveniences, which we do not point out, but they will be obvious to farmers on a deliberate examination.]

The main building, extending to A. B., fig. 2, is 60 feet by 48—corner posts 21 feet long, resting on the wall of basement, 10 feet above level of barn-yard. The ground at the north side of barn is five feet higher than at front, or south side. The overshot, from A. B. to C. D., fig. 2, is covered with a gravel roof, falling one inch to a foot, and is 24 feet wide, leaving the corner posts at C. and D. each 19 feet long. The straw house E., is 30 by 45—19 feet high at corners, the front, F., being supported by a trussed girder, resting at G. on a stone pillar. C. G. is likewise a trussed girder. The extension, A. B., fig. 3, is likewise covered with a gravel roof, falling one inch to the foot, the floor being on a level with the main floor of the barn, leaving a space underneath for putting carts, wagons, &c., out of the weather.

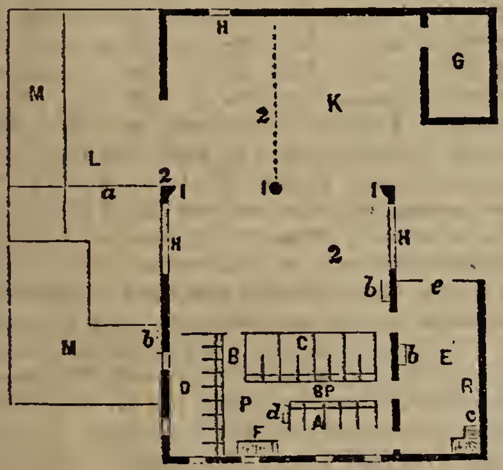

Fig. 1.

Fig. 1. Basement and yard. A. horse stables, each 5 feet wide, 14 feet deep. B. B. entry, 6 feet wide. C. close stalls for cattle or cows, 4 feet wide, 11 feet deep. D. stalls for cattle. E. yard connected with horse stables, entered at *e*. F. stairs to second floor, rising from F. G. pig pen, having a building over it, partly for corn for hogs, and the remainder ceiled and plastered, and furnished with perches and boxes for hens. The yard is surrounded by a wall 5 feet high, except under the building, where they are carried up to the level of the second floor, openings being left at H. H. and H. for ventilation; these can be closed in severe weather by shutters. I. I. I. pillars supporting the front girder. K. L. yard, which may be divided at *a*; the portion L. is covered in part by the sheds M. *b. b. b.* water troughs, supplied by a ram. *c.* stairs to carriage house, rising from *c.* *d.* feed chest. Under the mangers of the horse stables there are likewise feed chests of the form shown at N. fig. 4, opening by the lid *o*, into the entry B. These being above the floor, may be made rat and mouse proof. The funnels from the bays above, open into the entry at P. P., and into the yard at 2. 2. 2. The stables and entries are all floored with concrete, being perfectly rat proof. At R. are pins for harness.

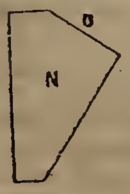

Fig. 4.

Fig. 2.—H. carriage house. I. I. I. I. bays 22 feet wide. E. straw house, 30 by 45 feet. K. chaff room, rising 3 feet above main floor. L. L. L. L. grain bins, raised 1 foot above floor of granary. M. dark room for meat. N. abutment and wing walls for supporting embankment. O. O. base of pillars supporting front of A. B. (fig. 3.) P. P. wing walls supporting embankment to carriage house door. 2. 2. landing of stairs from basement. R. stairs to main floor. This story is 7 feet high.

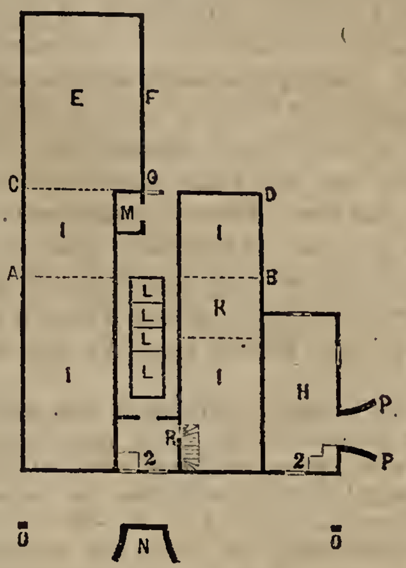

Fig. 2.

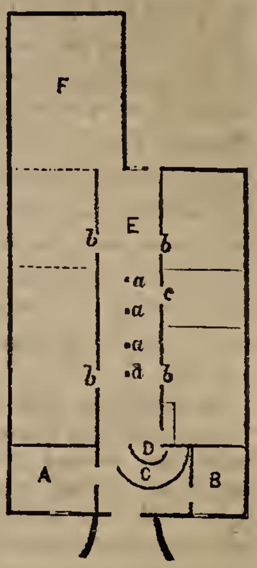

Fig. 3.

Fig. 3.—Main floor. A. B. tool rooms. C. circular railway to turn horse-power of threshing machine out of the way when not in use. The power turns on a pivot at D. E. main floor, 16 feet wide and 88 feet long, lined at sides 4½ feet high. *a. a. a. a.* openings to grain bins. *b. b. b. b.* doors into bays. *c.* floor into chaff house. F. straw house. The main floor is laid with inch pine, double thickness, the boards being so laid as to break joints.

It will be seen that nearly all the yard is covered, thus protecting the manure from the sun and rains. By the free use of gypsum, the straw and fodder is rotted as thoroughly as though it were exposed to the weather. In fact last fall the only part that was found to be imperfectly rotted, was in the uncovered part of the yard. One load made under cover is worth two exposed to sun and rain. S. Alsop. *Chester Co., Pa.*

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[For the Country Gentleman and Cultivator.]

BLACKBERRY WINE.

Gather when ripe, on a dry day. Put into a vessel with the head out, and a faucet fitted near the bottom; pour on them boiling water to cover them. Mash the berries with your hands, and let them stand covered till the pulp rises to the top and forms a crust in three or four days. Then draw off the fluid into another vessel, and to every gallon of liquid add four pounds of sugar; mix well, and put into a cask to ferment for eight or ten days, and throw off any remaining lees, keeping the cask well filled, particularly at the commencement. When the fermentation has ceased, bung it tight; after six to twelve months it may be drawn off and bottled.

Variation.—"To one bushel of blackberries put one gallon of water. Let the compound stand for twenty-four hours, at the end of which, mash and strain the blackberries. To every gallon of juice put three pounds of sugar; set this to ferment, which it will do in about fifteen days, more or less, according to the temperature of the weather. Bottle up and keep for use." C. N. Bement.

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[For the Country Gentleman and Cultivator.]

GRAPE WINE.

Bruise the grapes, which should be quite ripe. To each gallon of grapes put a gallon of water, and let the whole remain a week without stirring. Then draw off the liquor carefully, and to each gallon add 3 lbs. white sugar. Let it ferment in a temperate situation; when fermented, stop it up tight. In the course of 5 months it will be fit to bottle.

S. M. M

[For the Country Gentleman and Cultivator.]

No. 29---THE ARMY WORM MOTH.

Messrs. Tucker—I have an illustration of "the pursuit of knowledge under difficulties" to present. Dr. John Bartlett of Pesotum, Champaign Co., Ill., sends us in spirits, in a tin tube, a specimen of the renowned Army worm, and of the moth which is bred from it. Now spirits is the very best vehicle in which to preserve and transmit all kinds of worms, spiders and beetles; but insects with delicate wings, such as butterflies, moths and flies are usually ruined by being wet, their wings becoming matted together in a wad, like a wet dish-cloth, and if prettily colored, their colors are liable to be altered or destroyed by spirits. An inexperienced collector, therefore, will do best to place such insects between layers of cotton in a small box, to transmit them without injury by mail or express.

On emptying the tube from Dr. Bartlett it was with deep regret that I saw this moth of the Army worm lying before me, soaked to a soft, shapeless, black mass, which might on drying wholly fail of showing me the same colors and spots which naturally belong to it. On carefully disentangling and spreading its wings, and drying it, my first step was to compare it with the broken and effaced specimens received last year from Dr. Jenkins of Maryland, mentioned in my letter to Hon. B. P. Johnson, lately published in the Co. Gent. I hereupon saw that the Army worm in Maryland last year, and that now in Illinois were undoubtedly one and the same insect. And now, by a searching look from one to the other of these soiled and imperfect specimens, I was able to gather from them certain marks by which I thought I could recognize this insect if I chanced to have any other specimens of it in my collection. Upon looking over the moths of the cut worms I find nothing like this among them. Turning then to another group, lo, here I have it!—two perfect specimens, received a few years since in a fine collection from Prof. D. S. Sheldon of Iowa College. *Laus Dei!* The riddle is now read! What for nearly a score of years I have been so anxious to obtain I now have! I know what the moth of this Army worm now is! And in the fulness of my joy hereupon, I thank you, Prof. Sheldon, and you Dr. Bartlett, and Dr. Jenkins, each and all, that you have collectively furnished me with such clues as have enabled me to make this discovery.

A short sketch of the history of this species, as it appears in our works of science, will interest the reader. Long ago, a preserved specimen of this moth found its way into the then celebrated collection of Mr. Francillon in London. Upon the breaking up and sale of that collection, this specimen passed into the possession of Mr. Haworth, who, not doubting but that it had been captured in England, described it very briefly, in the year 1810, in his *Lepidoptera Brittanica*, page 174, naming it *Noctua unipuncta* or the White Speck, by which names it has ever since been referred to by English authors and collectors, save that a new generic name, *Leucania*, replaces that of *Noctua*. It appears to have been through inadvertency that Mr. Stephens changed this name to *impuncta*, when he came to describe the species in 1829, in his British Entomology, Haustellata, vol. iii, p. 80. Later, in 1850, he refers to it under its original name, in the List of Lepidoptera in the British Museum, p. 289, it having now been ascertained that it was a North American and not a British insect.

Guenée appears to have overlooked this species of the English authors. In his valuable work on the Lepidoptera (vol. v., p. 77—Paris, 1852,) he regards it as a new species, naming it *Leucania extranea*. From him we learn that there are specimens of it in several of the Paris collections, whereby they know it to be a common insect in North America, Columbia and Brazil. He also states that a variety of it which is destitute of the white dot on the fore-wings, occurs in the East Indies, Java and Australia. I cannot but think, however, that this East India insect should be ranked as a distinct species from ours, as it differs in such a prominent character, and is so widely separated from it geographically.

From what has now been stated, it will be seen that the original and therefore legitimate scientific name of this insect is *Leucania unipuncta*. And the "Army-worm moth" will undoubtedly be the common name by which it will be currently designated in this country, instead of the White Speck, the name given it in England.

About a dozen New-York species of this genus, *Leucania*, are known to me. They are those white and pale yellow moths or millers which are so common in our meadows and other grass lands, and which flit aside in such numbers when the scythe of the mower sweeps their coverts from them. And the "black worm," which in this section of our Union sometimes shows the same gregarious and migratory habits as the Army worm of the Western and Southern States, I now infer to be the larva of some one of these moths.

I have scarcely sufficient space remaining to give in his article such a full and particular description of this moth as ought to accompany this announcement of its name, and will enable every one to distinguish it with certainty from other moths which resemble it.

It is very plain and unadorned in its appearance. The eye, on first glancing at it, only recognizes it as an ordinary looking moth of a tarnished yellowish drab color, inclining to russet, with a small white dot near the centre of its fore wings, and a dusky oblique streak at their tips. On coming to look at it more particularly, we find it to be rather less than an inch long to the end of its closed wings, or if these are extended it is about an inch and three quarters in width, different specimens varying somewhat in their size. Its fore wings are sprinkled with blackish atoms, and a short distance forward of their hind edge they are crossed by a row of black dots, one on each of the veins. Outside of the middle of the wing this row of dots suddenly curves forward, and from this curve a dusky streak runs to the tip of the wing, the ground color being more pale and clearer yellow along the outer side of this streak. Though the moths of some other genera usually have a similar streak, this is the only species of this genus in which this mark occurs, and hence M. Guenée names this species *extranea*, i. e. extraneous, foreign, different, as though it did not belong here. And Mr. Stephens doubts whether it correctly pertains to this genus. But a character that will appear to common persons as more conspicuous and important, is that from which Mr. Haworth names this species. Nearly in the centre of the wing is a milk-white dot, placed upon the mid-vein. This dot is surrounded more or less by a dusky cloud, and this duskiness is frequently extended forward upon the mid-vein to its base, forming a faint darker streak along the middle of the wing. Contiguous to this dot on its outer side may be discerned a roundish spot of a slightly paler yellow color than the ground, and a very short distance forward of this is a similar spot, but smaller, both these spots often showing a more tarnished centre. On the hind part of the wing the veins are marked by slender whitish lines, and between their tips on the hind edge of the wing is a row of minute black dots.

The hind wings are smoky brown, with a purplish gloss, and are nearly transparent, with the veins blackish. The fringe of both pairs of wings is pale yellowish, with a dusky band on the middle.

On the under side the wings are much more glossy and paler, opalescent whitish inwardly, and smoky gray towards their outer and hind sides, where they are also freckled with blackish atoms. The smoky color on the hind wings has, on its anterior edge, a row of short, blackish lines, one placed on each of the veins, and in line with them on the fore wings is a faint dusky band, becoming more distinct towards its outer end, or sometimes only represented by a dusky dot on the outer margin forward of the tip. The veins are whitish, and also the hind edge, on which is a row of black dots placed between the tips of the veins. The hind wings have also a blackish crescent-shaped spot a little forward of their centre.

The abdomen or hind body is smoky gray above, and on its under side ash grey, freckled with black scales, and usually showing a row of black dots along each side.

Though these moths are subject to some variety, whoever has one of them in his hands will find it to coincide so exactly with most of the particulars stated in the above description, that he will be fully assured it is this insect.

Salem, N. Y., July, 1861. ASA FITCH.

P. S., *July 17th.*—A fine specimen of this moth reaches me to-day from Mr. Emery, editor of the Prairie Farmer. It is a male, and indicates this sex to be smaller, measuring but little over an inch and a half across its spread wings. It is also of a darker or more smoky gray color, but does not appear to differ otherwise from the description above given. A. F.

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[For the Country Gentleman and Cultivator.]

BLACKBERRY WINE.

Eds. Co. Gent.—I notice some of your subscribers ask for receipts for making wines. I send the following for blackberry, which I have found to make a superior article.

Receipt for Blackberry Wine.

Take 1 bushel ripe blackberries,
15 lbs. best white sugar,
2 gallons water,
10 oz. raisins.

This will make about 5 gallons wine.

Manner of Making.

Take the 1 bushel blackberries, bruise well in a tub, and pour over them 2 gallons boiling water; let stand till cool, and then strain or press.

To each gallon of juice thus obtained, add 3 lbs. best white sugar. When the sugar is all dissolved, put the liquid in a cask or other vessel that will just hold it, and let it stand in a moderately cool place without corking, to ferment. The fermentation will throw off the foreign matter from the liquid by keeping the cask or vessel full, adding berry juice or water as the quantity is diminished by fermentation.

When the fermentation has nearly ceased, (which is known by it ceasing to make any noise or but little effervescing,) then cork tightly, and let stand without being disturbed in any way until November or December. Then rack off the liquid carefully and throw away the dregs or lees, wash the cask clean, and return the liquid, and add 2 ounces of mashed raisins to each gallon; cork tightly, and let stand a month or more, when you will have a wine of good drinking quality.

Brick Meeting House, Md. C. H. HAINES.

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[For the Country Gentleman and Cultivator.]

CURRANT WINE THAT WILL KEEP.

Messrs. Editors—In the last No. of the 17th vol. of your sterling paper, I notice a call for a recipe for wine from the currant, the elderberry, and the blackberry and grape, "that will keep sound and good."

I have made wine from the red Dutch currant for many years past. I have barrels of it now on hand, which is twelve and thirteen years old. Perhaps that is old enough to satisfy the inquirer that it will "keep sound and good." Age improves its richness and flavor. My method of making it is very simple, easy, and speedy—*provided* a little machinery is prepared for mashing the berries and pressing out the juice.

Recipe.—Take 18 gallons of well ripened Red Dutch currants on the stem, run them through the mill so as to mash every berry. Add 18 gallons pure *soft* water; stir well so as dissolve the mucilage of the currant. Press dry through a strong *woolen* bag. Now add 3 to 4 lbs. of common brown cane sugar to the gallon of this liquor; put in a new oak barrel loosely bunged; let it stand 6 to 8 weeks, then "rack off" *carefully*, so as not to agitate the lees; thoroughly cleanse the barrel and return the liquor; bung tight and place the barrel, faucet in, where it will not be disturbed while the wine is on draught. In three months it will be palatable wine, and will improve by age for years to come.

The most difficult and tedious part of the process of making wine from the currant, without machinery adapted to the work, is the mashing of the berries. The skin of every berry must be broken before consigned to the press, for no ordinary press has power to do it, *in mass.* To remedy this difficulty I constructed a mill, simple but effective and speedy. I made two fluted rollers to match, of hard seasoned wood, 8 or 9 inches in diameter, 14 inches long, 1¼ inch flutes. Upon the shaft of one of these rollers I affixed a crank. These cylinders were placed together horizontally upon a frame two feet high and four feet long, to allow a tub to set underneath; over these cylinders, and embracing the upper half of them I place a "hopper" that will hold a bushel or more, nicely fitted to the ends and flutes of the cylinders, which are adjusted by keys driven perpendicular against the journals of one of the rollers. When all is properly arranged the smallest berry cannot escape being mashed.

With this little simple mill I could, with one hand, mash berries enough for a barrel of wine in about one minute.

Any ordinary press of sufficient power will answer the purpose.

The best press box is made of straight staves, iron bound, bored full of small holes; in *this*, place a new gunny bag, and in the gunny the woollen strainer and you are prepared to apply any amount of pressure required.

As I am preparing a vineyard of the Catawba, Delaware, Concord and other grapes, I shall look with much interest for the recipe for grape wine called for by your correspogdent.

Alton, Ill., June 30, 1861. ELIAS HIBBARD.

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[For the Country Gentleman and Cultivator.]

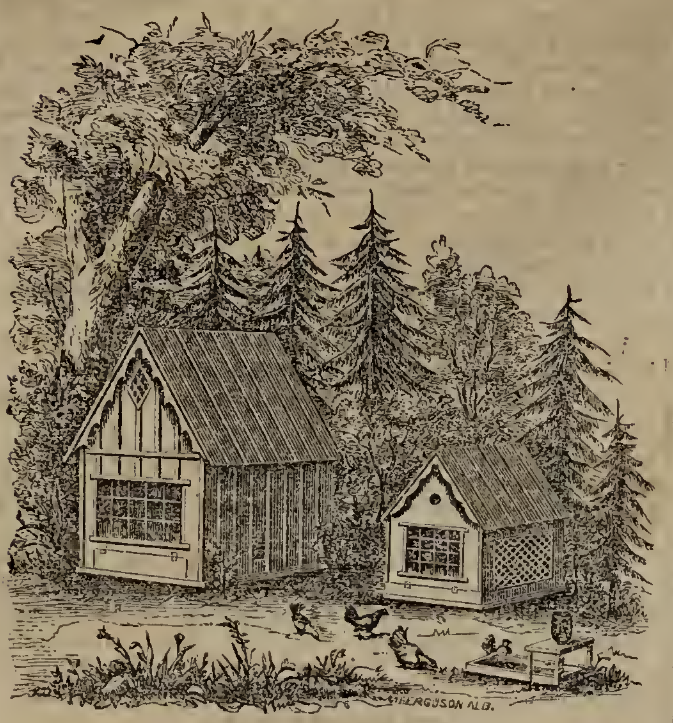
CRANBERRIES.

Messrs. Editors—I have an acre or so of low ground which was formerly covered with water six months in the year, but of late has been drained so as to carry off the surface water; but the drain is not low enough to make the ground dry. The soil, from six to twelve inches, is black muck, with an intermixture of sandy loam, and a hard clayey subsoil through which the water cannot pass. By closing the drain the ground can be flowed in the wet season.

Can you or any of your subscribers, inform me—1st. Whether the ground above described can be profitably planted with cranberries? 2d. Where can the right kind of plants be obtained, and their cost? 3d. How far apart should the plants be set? 4th. What is the best time of year for setting? 5th. Should the ground be plowed, and if so, when and how long? C. P.

Jefferson Co., N. Y.

1. The soil, judging from the description, would be well adapted to cranberry raising; but if a coating of two or three inches of beach sand, or if this cannot be obtaind, of any clean, coarse sand, could be applied to the surface of the muck, after the latter has been well mellowed and rendered clean, it would doubtless be a great improvement in promoting the successful growth of the plants, as well as facilitating clean culture. 2. The plants may be obtained of Dr. Halsey, of Victory, Cayuga co., but we cannot name the cost. 3. The distance apart depends on the supply of plants. If the plantation is small and the plants abundant, they may be set a foot or a foot and a half apart; under other circumstances two or three feet will do. The more thickly they are set, the sooner they will mat the whole surface, and the cost will be less in keeping them clear of weeds. They should be far enough asunder in any case to allow clean cultivation till the plants are well under way. By procuring enough plants for a part of the land, the increase in a few years will be enough to plant the rest. 4. If the land is dry enough and in good order, the plants will be best set in spring; but otherwise they may be set in autumn and kept flooded through winter, to keep them from being thrown out by frost; the water to be let off in spring. On a peaty soil, it will be difficult to prevent throwing out, except by flooding. A coating of sand will greatly lessen this liability. Cultivators differ as to the proper time to flood established plantations, and we are not prepared to decide the question.



[For the Cultivator and Country Gentleman.]

CHICKEN COOPS.

"Well, what about chicken coops?" We will tell you, kind reader. If you wish to be successful in rearing chickens, particularly early ones, it is very important and necessary that you should provide warm, dry, airy and comfortable abodes for them. A very great error heretofore has been, in confining the hen with her little family, in much too cramped and confined quarters, to the no small inconvenience to the mother, and great danger to the chicks. In nine cases out of ten, the coops are entirely too contracted, hot and uncomfortable. Draw a comparison between a hen and her brood confined in a small, low, contracted room, hardly sufficient for her to turn round, much less to carefully brood her young, and a large airy apartment, well protected from heat, wet or cold, and sufficient space for exercise.

We have used most contrivances for this purpose, but never have found any one to answer *our* purpose as well as those we are about to describe, and figured at the head of this article.

For very early broods, we prefer one with sash and lights, for the reason that by placing it facing the early sun, affords warmth to the inmates so congenial to their nature. Two or three hours sunshine is worth a week of codling and swaddling by the kitchen fire, and rarely does a young chicken think the sun's rays too powerful for them. They can bear and require a great degree of heat. We have seen them, in the cold frosty month of January, when allowed the privilege of the kitchen, to approach near the range, and stretch themselves on their sides in front of the ash-door or grate, with apparent gratification and comfort. The same may be often seen in one of these glazed coops; showing most conclusive evidence of their enjoyment, in the warm rays of old Sol.

We have adopted the following for our very early broods, which we have found to answer admirably: A large dry goods box was procured, the top and one side removed. We then sawed a strip from the top or side pieces $2\frac{1}{2}$ inches wide, and nailed it across the front, from end to end at the top. Then we sawed another strip 3 inches wide and nailed it across below to within 3 inches of the bottom. Another strip of the same width to be secured to the one above, with leather hinges, forming a door 3 inches wide, the whole length of the front, hung to the strip above, opening upwards, answering the purpose of egress and ingress for the little chicks, as well as for the purpose of cleaning the floor. Then, procure a sash of suitable size, and screw on in front, covering the open space. In one end, or in the back, as best suits your convenience, saw a hole for a door 6 inches wide, and 7 inches high, which may either slide or be hung with hinges. The body is now finished. For the ends, procure $1\frac{1}{4}$ inch pine plank, match them and mark out the gables, giving them any pitch you deem best. Nail a two inch strip across from front to rear on the inside of each end, so that when the gable is set on the edge of the box, it will be flush on the outside; nail the gable to the cross piece, and the other end the same way. The roof may be made of pine boards and battened. We sometimes use the tops or sides for that purpose, and batten with lath planed Let the roof project 3 or 4 inches at the eves and ends. Verge boards may be put on or not, just as fancy dictates Now saw a round hole in each gable near the top, 7 or 8 inches in diameter; put a coarse wire grating on the inside, or lattice with very small strips $\frac{1}{2}$ inch square; (this should have been done before the roof was put on); retain the round pieces to close the holes when necessary to exclude the cold and secure the warmth. When the grated windows above, and the long narrow door below are open, a free circulation of fresh air is admitted, which is so essential to their health. So soon as the day wanes in spring, and while the temperature is low, we cause the doors to be closed for the night, where they remain warm and secure from skunks, rats and weazels, till the next morning, when a similar move takes place.

The interior of most chicken abodes is not always so entirely in view as to render it at once perceptible, whenever our poultry woman or man (we incline to the former functionary,) has the same idea of the importance of cleanliness and purifying as we ourselves may think necessary – the health of our chickens will soon satisfy us that they appreciate the care

To render this coop more complete for summer, we remove the sash, and substitute a frame with fine lattice. This affords the inmates plenty of air, and still protects them from vermin.

In order to keep the chickens in good health, so confined, it is essential that the greatest precautions should be taken to ensure cleanliness in all departments; therefore the coops should be cleaned out daily, and sand or fine gravel put in, which prevents any portion of filth adhering to the floor. Fresh water, in clean vessels, should be placed before them morning and afternoon. Impure water may be put down as a main cause of pretty much all the diseases poultry are subject to: diarrhœa, gapes, and other maladies.

But do not let our readers be frightened by the minuteness of these directions, for at a later season the chickens may be left much more to themselves; only let them remember that if in possession of good fowls, and they desire to have healthy chickens at an early period of the year, their chances of success will be infinitely increased by following our advice.

If the coops are placed contiguous to each other, and more particularly where other fowls are allowed to range, we recommend a small court, in which both the hen and chickens are together, with the coop to retreat to in bad weather. The court may be made of lath, six feet long, two feet high, and the width of a lath; the top also latticed. This would prevent the chickens from straying to other coops, and their danger from hawks, cats, rats, or even the ill-temper and spitefulness of some of her own race, which often terminates in death to the truant. It would also protect them when feeding.

Chickens hatched in June and July we merely keep in the coop for ten or twelve days; after which we give them their liberty, and have found them to thrive far better than when confined either in courts or coops.

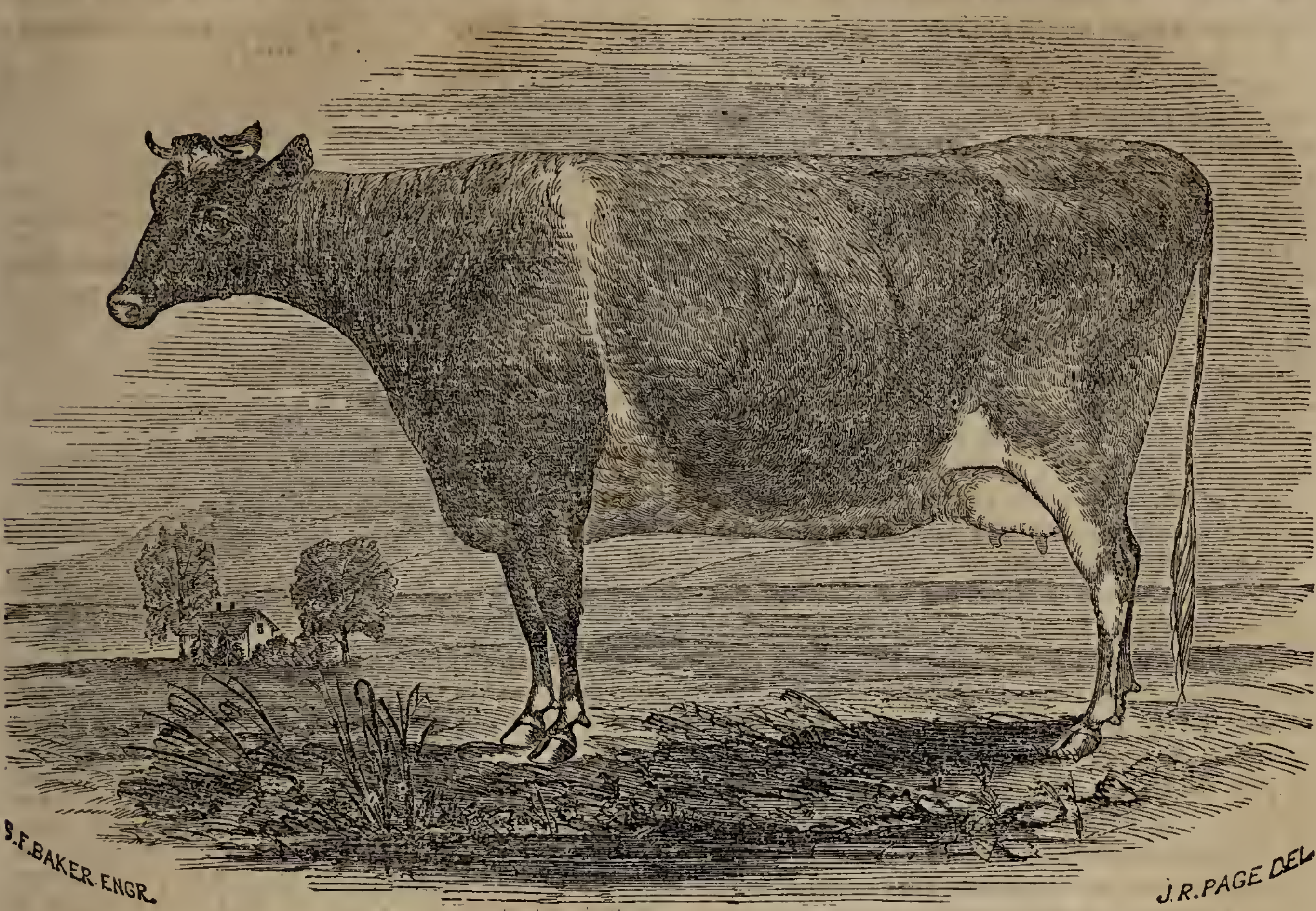
The architectural style of these coops may be varied according to fancy; embracing the Roman, the Italian, the Turkish, the Russian, the French, the Chinese, and the American Log Cabin. C. N. Bement

Lemon Beer.

Take two gallons water, two ounces ginger, two lemons and boil them together; when luke-warm pour the whole on a pound and a half of loaf sugar, two ounces cream tartar, add four tablespoonfuls of yeast, and let them work together for six hours. Then strain and bottle. C. T. A.

Loaf Cake.

Four pounds of flour, two pounds of sugar, one and a half pounds of butter, one quart of new milk, one pint of yeast, one pound of raisins, four eggs. Take the milk, yeast, and a part of the flour, and make a sponge of it and let it stand over night; in the morning mix in the rest of the flour, and let it raise; after it has risen mix in the shortning and seasoning and work it well. After it has risen, put it in pans and bake it. C. T. A.



ALDERNEY COW "JURA,"

Calved May, 1857—Imported by and the property of R. L. Maitland, Esq., Newport, R. I.

[For the Country Gentleman and Cultivator.]

A Novel Bee Freak---Invading Swarms.

On the 15th of July I had been out on the prairies a few miles, returning home about 3 o'clock P. M. The first thing I heard was that "*two* strange swarms of bees had come in a southerly direction and invaded a stock in one of our old hives. This seemed strange, but upon inquiry it appeared that the hives had been closely watched, being all in sight of the summer cooking apartment, and no swarm had left either of the only *two* old hives I have, and none was expected, because both had thrown off *large* swarms before. I had no alternative therefore but to acquiesce in the conclusion that one or two swarms of strange bees had actually come from some other place and "invaded" the old hive, which was pretty full before, and which, of course, must result in great commotion, and probably a battle of the queens during the evening and night succeeding.

On the morning of the 16th I had just returned from post-office, and sending a small boy home with the horse, commenced mowing, when in about ten minutes our oldest girl returned on the horse—I was half a mile from the house—to say that one swarm of the "invading" bees had just come out and were alighting in a tree near by. It was about half past eight, a. m. I rode home and hived the early moving swarm, about half a peck, quickly. About 4 p m. another cluster came through the air, when I again left mowing and added these, about a quart, to the morning swarm. As I could not see a queen on the cloth used for the latter to move upon into the hive, I think the second cluster may have been made up of "stragglers" from the 8 o'clock swarm. They stay in the hive, and appear to be going to work.

As I never heard of bees swarming at 8 a. m. in a natural way, and as the morning was no more than comfortably warm. I incline to believe this swarm was one that had lost its home, and was directed or guided by some bees that had been with ours before; and their leaving the hive so *early the next day*, makes towards the inference that they had been driven out by a very natural war of "resistance" within, where, from the crowded condition, any "engagement" must have been in "close quarters." The strange bees rushed into the hives when they first came in great haste, and were seen coming a distance of *twenty rods* before they alighted. There can be little doubt therefore as to their being invaders from a distance, though, of course, they neither designed nor inflicted devastation, as invaders usually do. And this view is further supported by the old hive appearing as full now as before the "late unusual commotions" there, whence a large natural swarm had left two weeks before. The several hives were closely observed; no swarming noise as made when bees leave the hive had been made, nor other sign of swarming noticed. The second swarm has not yet emerged; the queen must have been killed therefore. But even if a swarm could have left so suddenly as not to be perceived, I suppose *two* swarms would not leave and return into one and the same hive the same day. Not having had much experience with bees, though mine do well this season, I have stated these facts that others who may feel interested may, when so disposed, supply further information in illustration or explanation of the fact of this "freak of bee nature."

Wisconsin, July 17, 1861. C.

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[For the Country Gentleman and Cultivator.]

ELDERBERRY WINE.

To every quart of berries add 1 quart of water; boil half an hour; run the liquor and break the berries through a hair seive; then to every quart of juice add ¾ of a lb of sugar; boil again ¼ of an hour, with Jamaica peppers, ginger, and a few cloves; when sufficiently cool, pour into a barrel a cup of yeast and a piece of toast to assist the fermentation—(to be kept in a warm place) When it ceases to hiss, add 1 qt of brandy to 8 gallons of the liquor; then close the barrel perfectly air tight, and keep in a cool place for six months when it will be fit to bottle. S. M. M.

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Peach-leaf Yeast.—A correspondent of the Prairie Farmer says—"Please inform your friends at the "Tea Table," that peach leaves used in the same way as hops, make *excellent* yeast. They may be used fresh from the tree during summer, but the winter's supply should be picked before frost comes, and dried." It may be worthy of inquiry whether there is a possibility that the minute quantity of prussic acid in the leaves can exert any deleterious effect?

Packing Butter in Firkins or Tubs for Preservation.

During our recent visit in Chester county, Pa., we found it to be the universal practice to market all the butter made, while fresh—sending or carrying it into Philadelphia for this purpose, regularly once or twice a week through the season. Thus, through the summer months, the farmer's most valuable time is much of it consumed in going to market; there is a glut of first-rate butter offered at that period of the year, and when winter comes there is not enough preserved or manufactured to fully supply the *home demand* even, and the firkin butter of this State is sold by the tradesmen in West Chester, in the midst of a region that ought to supply its own wants at least, all the year round. D. B. Hinman, Esq., President of the County Ag. Society, is doing much to persuade the dairy farmers to change their system and pack down more butter; and, partly at his suggestion, we wrote on our return to one or two friends in Chenango and Delaware counties, in this State, to obtain exactly the process followed by them, in order that our friends in Chester county may share in the benefit of the experience obtained in what is among the *very best* dairying regions either in this State or country. We may, perhaps, be excused, however, for expressing great doubts whether there will be enough who make and succeed in the endeavor there, *on account of our publishing these directions*, to compete injuriously with the long established trade of our own dairy counties.

The following response to our inquiries was kindly furnished by John Shattuck, Esq., of Chenango Co.:

Editors Country Gentleman—I cheerfully comply with your request in giving such information in relation to packing and keeping butter through the summer season as I am competent to do, giving you the method that has proved the most successful with us:

1. In the first place you ask in regard to *churning;* we use dog power, having the *temperature* in warm weather about 55 deg. Fah., which gives the butter a *good solid consistency.*

2. When the butter comes, it is removed and washed with cold ice-water until the *buttermilk is all removed.*

3. It is then salted—about *one ounce of salt to a pound of butter*—worked in thoroughly, and set in a cool place for twenty-four hours, when it is worked just sufficient to remove *all the buttermilk.*

4. It is then packed in the firkin, and covered tight, so as to *exclude the air.*

5. When the firkin is filled, then you put a cloth over the butter, put on a good covering of salt, and then pour on water, which makes a brine. We keep it thus covered until it goes to market, (it being the only way we could ever keep a dairy perfectly sweet through the season.)

These rules *strictly* observed, I will warrant never to fail, if the butter is properly made.

We use good white oak firkins. *Manner of preparing them before putting in the butter*—fill them with cold water to soak three or four days; a handful of salt thrown in will make them all the better. When we get ready to put the butter in the firkin, we rub the inside all over thoroughly with salt, which forms a brine between the firkin and butter.

All the *salt* used about butter in any form should be good *dairy salt*, as there is more or less lime in other salt, which renders it unfit for butter.

Good soft water is also essential, as hard limey water is very objectionable.

If what I have written in this short letter is not sufficiently comprehensive, let me know, and I will give you a more comprehensive and detailed statement with regard to any particulars that you may wish to inquire about, as it always affords me pleasure to communicate to others anything in the line of agricultural pursuits that may be advantageous to them. John Shattuck.

Answer from S. L. Wattles, Esq., of Delaware County.

Editors Country Gentleman—I am glad to comply with your request, and give you the details of the method which has proved most successful with me in putting down butter, during the summer, for winter use and sale. And here I may say that my method is identical in almost every particular with that of all the most successful dairymen of this town.

1. The cows are milked regularly at the same hour morning and evening. The milk is not allowed to stand long in the milk-pails after milking, but is immediately carried to the milk-room and strained into tin pans. *Only about three quarts are put in a pan*, so that the milk may never stand more than two inches deep, often less in very hot weather.

2. The milk-room is above ground and in the summer time kept as cool as possible and well aired. The milk is left to stand in the pans from thirty to thirty-six hours—*never more than thirty-six*, and then the cream is taken off.

3. The cream is put in large tin pails with covers, and if the weather is warm the cream pails are set in the cellar to cool the cream.

4. The intention is, *always to skim the milk before it gets much sour.* Cream rises in pans set as above stated very quickly, and the sooner it is taken off after it is risen the better, both for the quality and quantity of the butter made from it. *Cream will all rise, if the milk is very shallow in the pans*, even in the hottest weather. And if it is taken off soon enough it will all be saved—while if the milk stands deep in the pans it will sour before much of the cream rises, or if allowed to stand too long before skimming, the cream is wasted and injured in quality.

5. Our women have a way of taking off the cream without the use of the skimmer. They use a knife only. They run the knife around the milk in the pan to separate the cream from the sides of the pan. Then they set the bottom of the milk-pan at the edge, on the rim of the cream pan, then with the left hand elevate one side of the milk pan so that the cream with the help of the knife in the right hand will run off into the cream pan. After a little practice it is done very quickly and saves both time and cream.

6. The churning is performed every day. The cream taken off one day is churned the next morning. The common crank churn is used and is worked by dog power. This crank churn is used because it is easiest attached to, and worked by dog power, and because it is more convenient to wash the butter in than the barrel or dash churn. The churning is done very slowly, requiring from two to three hours. The cream having been in the cellar all night, is always cool enough to commence the churning, but if the weather is very hot, and the temperature of the cream is likely to get too high while churning, cold water is put into the churn to keep it down—as very good butter cannot be made when the cream is warmer than 65 deg. when the butter is coming.

7. After the butter has come, the buttermilk is immediately drawn off through a hole in the end of the churn, and then about a half a pail of cold water is thrown into the churn on the butter. The crank of the churn is then turned around a few times and the water drawn off. After that a whole pail of water or more is thrown on the butter in the churn, and the crank again turned quickly a few times, and the water again drawn off, bringing with it every particle of buttermilk. The churn dasher is then taken out, and the remaining water is pressed out of the butter with a ladle.

8. The butter is then taken from the churn and put in the butter bowl and weighed, and it is then salted with one ounce of Ashton salt to a pound of butter. The salt is well worked through the butter with a ladle, and the butter is set in the cellar and stands about twenty-four hours for the salt to dissolve, when it is again carefully worked, and the brine pressed out, and then immediately packed in the firkin.

9. The firkins are prepared for use by filling them with

water, and letting them soak eight or ten days. They are then scalded with hot water and rinsed, and after that the inside of the firkin is rubbed with a lump of salt, and it is ready for use, and filled with butter within an inch of the top. A cloth is then put on the butter and covered with salt half an inch deep, and then some brine poured on. The firkin is then covered up with a flat stone. Nothing more is done to them or the butter, except an occasional renewal of the brine when it dries away.

Dairies made in this way have frequently been kept at home in the cellar, as late as March of the following season, before they were sold, and have stood all the tests of time and different markets and climates.

We pack our butter for family use through the following winter and spring, early in the fall while the grass is good. It often lasts until the next June, and is always preferred to fresh butter made on hay in the winter, or on hay and grass together, in the spring. S. L. Wattles.

* * *

Proper Temperature for Churning.

The important influence of a proper Temperature for Churning, is a matter no longer overlooked by any good dairyman, and it will be seen in the letters elsewhere published from Messrs. John Shattuck and S. L. Wattles, that both gentlemen specify the particular degree of temperature preferred—Mr. S. putting it at "about 55 deg. in warm weather," and Mr. W. adding that "very good butter cannot be made if the cream is warmer than 65 deg. when the butter is coming." Since these articles were in type, the Paris Journal of Practical Agriculture for July 5, has come to hand, and we find it to contain an interesting report just submitted to the Imperial Ag. Society, by Mons. J. A. Barral, giving an account of experiments lately conducted by him with regard to the effect of temperature both upon the time occupied in churning, and upon the quantity of butter produced.

Mons. Barral employed two churns for these experiments—one of them what is known in Paris as the "Swedish Vertical churn," and the other a horizontal churn made by M. Girard:—

1. In the vertical churn, 6 litres, (10½ pints) of milk, at the temperature of 68 deg. Fah., after 5 minutes churning, gave 239 grams (8.44 ounces) of butter, or the butter produced was 3.99 per cent. of the milk churned.

2. In the horizontal churn, 4 litres (7 pints) of milk, also at 68 degrees Fah., gave 166½ grams (5.88 ounces) of butter, or 4.16 per cent. of the milk. In both cases about 5 minutes additional time was taken to gather and wash the butter.

3. In the horizontal churn the same quantity of milk, 7 pints, was again churned, but this time at a temperature of 53½ deg. Fah. After three-quarters of an hour there was no result apparent, but the temperature of the milk had been raised to 64½ deg., either from the warmth of the apartment, or the contact of the operator and friction within the churn. At the end of an hour, butter was formed in minute grains, like a sort of lather, and by putting hot water into the aperture around the churn, the temperature was raised to 70 deg., and the butter gathered after 9 minutes more churning. The quantity proved to be 5¼ ounces of butter, or 3.71 per cent. of the milk.

4. The same quantity of milk, again churned in the same churn, at a temperature of 86 deg. Fah., formed butter in *two minutes*, but after churning much longer, only 3.90 ounces of butter could be got, or 2.76 per cent. of the milk.

The facts derived from these experiments are—1. That the *time of churning* varies with the temperature, it taking *ten times longer* to get butter at 54 deg. than at 68 deg., and that at 86 deg. this time is less than half than at 68 deg. 2. That if the temperature is too high, the *quantity of butter* obtained is greatly lessened. Mons. Barral thinks the best temperature to be from 64 deg. to 68 deg. Fahrenheit.

The next step taken was to analyse a sample of the same milk tried in the churns. This showed its composition to be:

Water,		87.650
Butter,	4.679	12.350
Caseine, sugar of milk, &c.,	7.077	
Ash,	0.644	
		100.000

So that of the whole proportion of butter really contained in the milk, *there was lost*, in one of the two experiments at 68°, 14.7 per cent., and in the other, 11.1 per cent.; when the temperature was reduced to 53½°, this loss was increased to 20.8 per cent., and the time occupied was ten-fold greater; and, finally, at 86°, while the process was very greatly accelerated, the loss was still farther increased to 41.1 per cent., but little more than one-half the butter being made which the milk really contained.

The trial was made, it should added, the 24th of last April, with milk drawn from the cow the preceding evening.

Mons. Barral also made two experiments in the *churning of cream*, with the same horizontal churn. In the first, 7 pints of cream at a temperature of 61°, produced in 11 minutes, 1 lb. 5¾ oz. of butter, or 15.4 per cent. of the cream churned. In the second, 7 pints was again churned, being this time a mixture of 2 pints of cream with 5 pints of water—the whole at a temperature of 66°; in 5 minutes, 6⅜ ounces of butter was produced equal to 15 per cent. of the cream churned. The composition of this cream was:

Water,		79.52
Butter,	15.56	20.48
Caseine, sugar, &c.,	4.19	
Ash,	.63	
		100.00

The result of these trials, compared with the above analysis, shows that in churning the cream, in two experiments, 98.3 and 95.8 per. cent. of all the butter it was shown to contain by the analysis, were obtained in reality from the churn—being a loss of only 1.7 per cent. in the one case and 4.2 per cent. in the other—amounts *very greatly less than those lost when the milk was churned instead of the cream.* "Repeated trials," says Mons. Barral, "have demonstrated that the temperature at which we can get the most butter, and that in the least time, in churning the cream alone, is from 14 to 16 deg. centigrade," (from 57 to 61 deg. Fah.)

We have devoted this extended space to the foregoing experiments not only on account of the light they throw upon the proper temperature at which churning should be done, but because they demonstrate how much of the butter which analysis finds in the milk, we fail to extract from it by the ordinary process of churning. This loss is very greatly reduced when the cream alone is churned, if the above experiments are to be taken as conclusive; but as no analysis is added of *the milk after the cream was skimmed*, we cannot tell whether *all the butter* it contained was taken off with the cream, or whether there is some loss here which is not shown in the above figures.

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[For the Country Gentleman and Cultivator.]

FATTENING SPRING PIGS.

Messrs. Luther Tucker & Son—In a late no. of The Cultivator, page 181, I notice an article by J. Sibley, on Fattening of Spring Pigs.

I conclude his pigs must have been at least one month old when he purchased them—he fed them six months, making them at least seven months old, when they were killed and weighed 206 lbs. each. To those who breed Leicesters or Suffolks, this may be considered a great yield.

I breed the White Chester County Pigs, and last March I killed three pigs at *four months old*—the three weighed 618 lbs. I do not know how much they ate, but it is not probable they eat any more in four months than friend Sibley's did in seven months. D. B. Hinman.

Highfield Farm, Chester Co., Pa.

Seasonable Suggestion---Pulverizing Manure.

The first requisite in the application of manure is its thorough pulverization. It is impossible if in lumps or masses to intermix it properly with the soil, and unless intermixed it cannot be of much value. Any one may perceive what would be the difference in the effect of two loads of manure on land, one as fine as sawdust and diffused through the soil, and the other in lumps as large as one's head. One reason that the sediment deposited by irrigation is so beneficial, is the fineness of the matter; and the efficiency of liquid manuring is owing to the fine diffusion of the fertilizing materials through the soil. Manuring in autumn by spreading on the surface operates in the same way—the soluble parts being washed out and finely intermingled with the soil.

Many farmers are in the practice of applying their manure to the wheat crop early in autumn, and when the manure is in right condition, it is doubtless an excellent one. On heavy soils especially it operates to great advantage if spread over the surface after the plowing is completed, and harrowed in, or it may be spread after the wheat is drilled in, and broken and intermixed with the top soil by means of a fine tooth harrow. This operates beneficially in several ways: First, it enriches the surface, near which the roots of young wheat plants extend; secondly, it protects the surface in some measure from severe freezing, and tends to prevent winter killing; thirdly, it keeps the surface moist, and facilitates the growth of the grass seed in autumn, and the catching and growth of clover in spring. In this case the timothy seed should be sown two weeks after the wheat, to prevent its growing too strongly and interfering with the wheat crop.

In addition to the pulverization effected by harrowing, it would probably be an economical operation to fork over all manure, especially if long or fibrous, before drawing out and spreading, shaking all parts well to pieces, as in preparing it for a hot-bed. The effective value of a load of manure is reckoned generally at one dollar at least, and frequently as high as three or four dollars. Its efficiency would probably be doubled by reducing it to powder, so as to become finely mixed with the soil in harrowing. As a single hand would thus pulverize several loads a day, the profit of the operation is obvious.

In this connection the value of harrowing manure well with the soil before turning it under by the plow, should not be overlooked, but such harrowing never omitted, for whatever purpose.

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[For the Country Gentleman and Cultivator.]

THE WIRE WORM.

Messrs. Editors—In your issue of July 4, present vol., Mr. S. T. Kelsey says: "Wheat is in many places considerably injured by the wire worms," and that "these wire worms are getting to be a terrible pest, and we would like to learn of some feasible mode of exterminating them." What is here said of Cattaraugus county is mainly true of Orleans, and I believe more or less true in regard to the rest of Western New-York. Indeed, I should judge from the little seen in the agricultural papers in regard to this pest, that if not confined to Western New-York, it is at least a great deal more troublesome here than elsewhere. In this County, and more particularly in this section, there are a good many fields of winter wheat and corn more or less injured every year; these crops being generally more preyed upon than any others, though spring wheat, barley and oats are more or less injured. The principal reason wheat and corn are injured the most, is that there is more of these crops grown, and that they are generally the first crops raised on newly broken up sod ground. I often hear of these crops being damaged to the amount of from $200 to $300 on a farm of 100 acres. A near neighbor told me he lost more than $300 by them on his (100 acre) farm last year; and I hear a good deal of complaint from him, and many others this season. Indeed, I think I may safely say, that within the circle of a few miles, where I am more particularly acquainted, the damage caused by wire worms amounts to thousands every year. While judging from such data as I have come across, I think the loss in this part of the State must amount to a very large sum each year.

As to any "feasible mode of exterminating them," I have yet to learn of any that can be called effectual. The most common course is, to sow land known to be infested with wire worms to buckwheat, which it is said will kill them out; and there is probably no doubt, that sowing buckwheat two or three years will run them out, if it don't kill them. The opinion that buckwheat will kill them, has probably arisen from the fact, that they will not eat much of it. And that by keeping the land in that grain until they have run their course and gone, there being no suitable place for the deposit of the eggs, of course another supply of the pest is not provided for.

But this remedy is a poor one at the best, as it is seldom or never tried until one crop of some more desirable grain has been partially or wholly destroyed; and then necessitates the sowing of rich land—as they are almost always found in rich land, and generally in fields that have lain a considerable time in grass—to an inferior, and in this section, uncertain crop, for at least two years; and then leaves the land more or less seeded to it, to the injury of succeeding crops. All of which, of course, must bring a very considerable loss on the farmer.

As to other "modes," I have never seen any tried that could be relied on. Salt has been recommended; but I have seen corn badly injured where a handful had been applied to each hill, and have pulled up stalks that were surrounded with salt at the top of the ground, and found the worms boring into them, some having penetrated so far as to remain in the stalk after it was pulled up.

Another remedy that has been strongly recommended, is fall plowing. It has been said, plow late in the fall when the worms not having a chance to return back deep into the ground will be frozen to death the succeeding winter. This has frequently failed—one instance of which was a ten acre lot adjoining my land, that was plowed very late, and if I am not mistaken, finished in December, and freezing up very soon after. The next spring it was planted to corn, and the whole destroyed, except about one acre in one corner that run up on a sandy and gravelly ridge. This lot had lain in grass six years. The cultivated grasses to which it had been seeded, having run out, and been followed by June and wire grass, it was undoubtedly in a very favorable condition for the wire worm. It was also the kind of land, a rich, loose, dark colored soil, containing considerable vegetable matter, which is most liable to be infested with them.

Other remedies have been recommended and tried with no better success; and we have yet to learn of "some feasible mode of exterminating them," which can be relied on.

But while it is extremely difficult to kill them out, when they are in the land, until they "have had their day," yet I believe they may generally be prevented from infesting our farmers, in such numbers as to do a great deal of damage. The only way to do this, so far as I know, is to break up and seed down often, never allowing land that has been infested with them, or that which from the nature of the soil may be supposed to be well adapted for them to work in, to lay to grass longer than one or two years; and to seed principly, or wholly to clover. And where land is badly infested, I am strongly inclined to believe, that good crops of clover may be, and have been raised, as I know of no reason why they would be more likely to trouble clover, than they would be to destroy buckwheat. By seeding to clover, and plowing up often, together with thorough cultivation, the natural pabulum of the wire worm, that is the June, and wire grasses, will not get possession of the land to a sufficient degree to allow of the soil's being badly infested with them. Hence, we very seldom see a field badly troubled with them, that has not lain to grass some years, a considerable part of which was June and wire grass, or land lying near such a field. F. *Orleans Co., N. Y.*

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Agricultural Items from the European Continent.

PREPARED BY THE EDITORS OF THE COUNTRY GENTLEMAN.

There are 600 Agricultural Associations in the French Empire, distributing about $240,000 in the aggregate in premiums of various kinds. — — — — Complaint having been made that the French Ag. Exhibitions were only "got up," as we should say, for the benefit of land-holders and other wealthy men, Mons. Barral relates that he was present at the distribution of about 70 prizes at the late Show at Metz; "there were not ten persons who came for them *who wore coats*—more than 60 being peasants, vine-tenders, herdsmen, laborers, &c., in blouses and thick shoes, with their iron-shod sticks, and very proud of their success." — — — That America, which has heretofore only sold *salt meat* to Europe, should have sent "real Durhams" to England, is spoken of in the Paris *Journal d'Agriculture Pratique* as proving *combien l'agriculture yankee marche vite dans le progres*—which may be freely translated to signify that the forward march of Yankee agriculture is a regular quickstep. — — — The Prussian Bureau of Statistics has just published some interesting documents with regard to the progress of breeding domestic animals in that kingdom, from which we learn that there were in Prussia

Horses,.............	1,240,000	in 1816,.........	1,617,000	in 1858.
Horned Cattle,.....	5,013,000	do.	5,487,000	do.
Sheep	8,260,000	do.	15,362,000	do.
Swine, ...	1,494,000	do.	2,577,000	do.
Mules, ...	———	do.	340	do.
Asses, ...	———	do.	7,336	do.
Goats, ...	143,000	do.	664,000	do.

Showing, by reducing other kinds of stock to an equivalent in cattle, that in the forty-two years, Prussia had increased the number of her domestic animals nearly one-half (43 per cent.) upon the live stock she kept at the commencement of that period. We are promised farther facts in connection with these figures, and at present will only call attention to the rapidity with which *Sheep* have increased in numbers with the improvement of agriculture, while *Cattle* have been almost at a stand-still—the increase in goats probably assisting to some extent in supplying whatever increased demand there may have been for milk.

Prussian agriculture shows a decided tendency to substitute bone dust for purchases of guano, and to mistrust the mixtures sold by manure makers.— — — — A trial has been made to introduce Ericson's engines in Prussia—as yet without success. — — — — Portable engines for farm purposes are still very rare there, the duty keeping out engines of English manufacture, and those of domestic construction failing to do their work well. — — — — Experiments made in Bavaria, in the preparation of peat, have excited a good deal of attention among agriculturists. There and in some other parts of Germany, peat is a very important article of fuel; we remember to have seen it in large open sheds to admit of ventilation, along the lines of some of the railways for engine use, just as in this country, the roads are bordered with wood sheds.— — — — Liebig and others have done much to call attention to the importance of utilizing the sewage of cities for manurial purposes, without any experiment having thus far been made to answer their efforts and expectations. — — — — The report of the Prussian Bureau of Rural Economy, from which these last items are taken, says that Short-Horns are there constantly coming into higher appreciation, although the results of purchases of them in England have not always proved satisfactory. — — — — The utility of great market fairs for the sale of animals of a particular kind is now fully recognized among Prussian agriculturists. A horse market established at Konigsberg was sustained successfully in 1860; a sheep fair was instituted in Pomerania, and a horse fair at Bromberg.

Agricultural education appears to be advancing more rapidly in Germany than in any other country, if one may judge by the number of schools and pupils. In Bavaria it appears that they are now establishing "schools of meadow culture;" one district alone (Upper Franconia) has three, and in Lower Franconia one has just been opened which already numbers 45 pupils and 12 professors. Efforts are also making for the establishment of "Schools of Sylviculture." — — — — In the central administration of Wurtemberg, it was lately proposed to appoint for each "circle" or district, a nomadic professor who should spend all his time in travelling, in giving agricultural advice and instruction, in preparing reports, and acting as an arbitrator or referee. This plan having failed to meet the approval of the ministry, several of the "circles" have chosen men of reliability to serve as "agricultural technologists," and charged them with what we take to be a sort of agricultural survey, together with such other duties as the interests of agriculture may demand. — — — It is stated that Professor Ran has collected at Hohenheim twenty or more school teachers, to give them agricultural lessons, which they may in turn impart to their pupils during the coming winter sessions. — — — In France, Agricultural education is not advancing as its friends could wish; nevertheless the means of extending agricultural instruction among all classes of society, are now studied and discussed, and improvements are hoped for "in the lot of the professors, and in the education of the pupils."

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Canada Thistles and Clover.—I think from past practical experience with Canada thistles, that thorough plowing will do more to eradicate them, than years of digging. We have tried both. I would advise those that have them to plow them, but be careful of the plow—clean it well before using elsewhere. We always cut clover early, and leave the second crop for seed.

J. T. HOWELL.

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Plaster, Ashes, and Experiments.

A late number of the Boston Cultivator furnishes the following statement and suggestions; and such experiments would be doubtless of much value if carried out, remembering that no single experiment is sufficient to form a conclusion, but they must be several times repeated, under all varying circumstances:

Mr. E. L. Metcalf of Franklin, informs us that a mixture of plaster and unleached hard-wood ashes, in about equal parts, made a little moist, and kept in a heap protected from rain, for four to six weeks, and then applied to crops, will generally produce a highly beneficial effect, even where plaster alone would produce no effect at all, and in all cases the benefit is greatly increased over that of pure plaster. Applications of this compound, and of plaster and ashes by themselves, and of guano, superphosphate of lime, &c., might be made by sowing breadths across fields, leaving spaces between without anything. The result would afford an indication of the comparative value of the different substances, and might show whether any of them could be profitably used for this purpose.

DISEASE AMONG SWINE.

Eds. Co. Gent.—There has been a disease among hogs in this town, the past month, which has proved fatal in most cases, and is in all cases confined to the *barrows*. I had two taken at the same time, the 6th of July. They did not come to the trough to eat for four days, and refused all food and drink but water. Stiffness in their hind parts, a great difficulty in voiding water, and inflammation, were the symptoms. I consulted the Country Gentleman for a case in point, but could find nothing noticed or prescribed that met my case; but in The Cultivator, Vol. 10, Feb. 1843, a correspondent states the loss of a fine hog under circumstances that seemed to meet my case, but as no remedy was given, and I could not find any in subsequent volumes, I concluded to experiment a little, for I was satisfied that the hogs could not live long unless soon relieved.

I first gave ½ an oz. *saltpeter* in a pail of water for each. I then put a pint of soft soap in warm water, and with a scrub broom, rubbed them thoroughly. To ½ a pint of the *spirits* of *turpentine* I put one oz. *saltpeter* well pulverized, and with an old paint brush I washed the loins and abdomen, and after the second application, (two hours after the first,) they voided water, and appeared relieved the next day. I washed again with the soap and water, but omitted the other wash. They continued to improve, and the afternoon of the fifth day from the time they refused their food, they eat with a good relish. The next morning I gave ¼ lb. of sulphur; the second day after, I repeated the dose, and they are now doing well. The hogs have access to charcoal and ashes, and salt in their food once a week. J. R. Prince.

Erie Co., N. Y., July 19, 1861.

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[For the Country Gentleman and Cultivator.]

CORN AND WHEAT CULTURE.

Eds. Co. Gent.—Some time ago I agreed to give the result of an experiment I was then trying in manuring corn in the hill, with a compost of about equal parts of leached and unleached ashes, wood-pile shovelings, and hen dung—a good shovelful to about four hills, thrown scatteringly into the hills, and the corn planted on it and covered in the usual way. We took the compost out in the cart and applied it in that way to eight rows at once across the field, then omit eight, and apply it to the next eight, and thus we done to 32 rows across a 15 acre field, and made no other difference in any part of our work. In the fall we cut the corn off and put it up in shocks of 8 by 8, or 64 hills in each shock. At husking we were very careful to keep each separate, and counted the ears in about twenty shocks of each, and that which was manured averaged 99 good large ears per shock, and the other 65 ears, not quite so large, and each shock had about half that number of soft and small or defective ears; the whole crop was small on account of rather late planting with bad seed, not more than one-third of which grew, and the replant was so late it could not mature.

The present year I have about 40 acres planted, about one-quarter of which we manured, broadcast, heavily from the sheds in the barnyard. From present appearances the crop will be large. I learned by sad experience last year to save my seed corn properly, and it seems this year as though every grain grew vigorously.

The more I see and know of manure, the more important it seems; even in this rich country (the Whitewater valley) it is much needed, and is still very much wasted, and scarcely economized or applied at all by great numbers of the old settlers, who just allow it to go to waste, while their farms are every year getting poorer. A good deal has been written lately about the mode and time of applying it. I have concluded that it is a very good way, on good land in this vicinity, to plant corn in sod fields without manure the first year, and the following spring haul out all the manure you can get, and spread broadcast and plow it in well, and plant corn again. In the fall cut the corn off, if it can be done soon enough, and put in wheat, or if it cannot be cut off, sow wheat among the corn in September, and cover with the double shovel plow—in either case the ground will be too rough for grass. Next year plow the stubble in thoroughly as soon as convenient after harvest, and at seeding time plow again well and sow timothy along with the wheat, at the rate of about one bushel to eight acres, and half that quantity of clover in the spring; then you will have nice, clean, level mowing ground and good hay for years.

Burr Oaks, New Paris, Preble Co., Ohio. S. S. R.

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[For the Country Gentleman and Cultivator.]

MERCURIAL OINTMENT FOR LICE.

Eds. Co. Gent. and Cult.—Your correspondent Mr. E. Marks, page 28 of Co. Gent., inquires if any one has had any experience in the use of mercurial ointment as a remedy for lice on cattle.

Mercurial ointment is usually made of quick silver and lard mingled together until it forms a soft paste; and there can be but little doubt that the illness of his cattle, and untimely death of one of his steers was the natural and certain result of the application of that compound to them. Mercurial ointment is a very dangerous medicine to use, either on man or beast. It is a very powerful medicine, which is proved very conclusively by its efficacy in sweeping away so soon, immense numbers of lice.

We often see a poor pitiable, forlorn wreck of humanity, whom *calomel* has not quite killed; and we wonder how it can be that such a small amount of medicine produces such an effect on the human system. It does it in the same manner that mercurial ointment injures cattle.

About twelve years ago, I had a lot of calves which were somewhat infested with lice, and I was induced to apply mercurial ointment. The ointment had the desired effect, so far as destroying the lice was concerned; but the effect on the health of the calves was so alarming, that I feared they would never recover.

I had always been told that, when mercurial ointment is applied to animals, it is very dangerous to allow them to be exposed to a storm, just as it was dangerous to allow a person to drink cold water after having taken a dose of calomel. Consequently, they were not allowed to go into the yard unless the weather was pleasant, for more than two weeks after the ointment had been applied. After two weeks had expired, I concluded all danger was passed, and they were allowed to run in the yard all day; and as soon as they got wet, there appeared to be an unusual irritation of the skin, and they commenced scratching, and licking themselves and each other; and in a day or two they nearly lost their appetite, and appeared sick, and lost much flesh, and it was several weeks before they appeared to have recovered. Indeed, I think they did not fully recover from the pernicious effects of the ointment until sometime during the succeeding summer.

It is very probable, that by licking themselves and each other, they collected more or less of the ointment on their tongues, and swallowed it, which exerted a deleterious influence on them, to a greater extent, perhaps, than could be attributed to the effects which would be produced by the external application only.

There is no necessity for resorting to mercurial ointment, as a remedy for, or destroyer of lice on animals; because, lamp oil—as has often been recommended in the Co. Gentleman and Cultivator—is very effective, not only in perfectly *preventing* the propagation of parasites on neat cattle and horses, turkies and gallinaceous fowls, but in destroying them, even when they are numerous. And more than this, if lamp oil be applied very abundantly, there is no danger that it will injure an animal, in the least, even when exposed to storms. But, *there is* great danger in using mercurial ointment.

S. EDWARDS TODD.

[For the Country Gentleman and Cultivator.]

HUNGARIAN GRASS.

Messrs. Editors—Seeing some inquiries concerning "Hungarian Grass," from your correspondent "Hampden," and also a little advice from "J. C. A.," on the same subject, I thought I would give you a little of my experience. I commenced raising this grass four years ago, by sowing the last of July and raising five tons to the acre. It was fed to all kinds of stock the following winter, and did admirably, for sheep especially, answering as well as timothy and oats *combined.* For other stock than sheep the seed is of no benefit, as it passes directly through them; but the grass itself comes the nearest to the genuine green article, when fed in the winter, of anything that can be raised. As for its being the cause of "stiffs" in horses, this is a worse humbug than the "pigeon grass" of which our friend "J. C. A." speaks. The complaint alluded to, was well and *dearly* known here in Iowa before a grain of Hungarian was brought into the State. I am well acquainted with a man living four miles from me, who this last spring lost five horses by "stiffs," not one of them ever having tasted Hungarian. I have nearly twenty acres of it this season, and knowing its good qualities, should be very unwilling to exchange for any twenty acre grain crop in the State. "J. C. A." must not answer for the entire community. W. B. J.

Iowa City, Iowa.

One word for your correspondent "Hampden," about "Hungarian grass." We last year sowed two acres—harvested from half a bushel per acre sown, some 6 tons—kept milch cows, horses and colts, sheep and poultry on same most of the winter, or until gone, *without other feed of any kind*, keeping all in better condition than could have otherwise been done with best timothy or clover hay, and corn or oats.

Our farmers have sown this grain (or grass, if you please) for several years past, and *generally prefer it to any other feed.* But one thing seems evident—if it is permitted to attain full ripeness before cutting, horses should not be allowed to have *too much seed at once*, else it causes bad effects; but if cut when just out of bloom, nothing can be better for any stock or more easily grown. Sow in the first weeks of May from a half to three-quarters of a bushel per acre, (not requiring a strong soil, else too rank of growth,) and I truly believe "Hampden," and all others, will bless the day that brought this new grass to our notice. I consider it *indispensable* to every farmer when cut early and judiciously fed. I trust "Hampden," and others, will give it an early trial, and give us the results through your best of all agricultural journals.

London, O. W.

[For the Country Gentleman and Cultivator.]

VALUE OF WOOD ASHES.

Nine years ago, while on a visit in Fairfield county, Conn., I observed some fields that produced very poor crops of both grain and grass; and seeing heavy crops on those very fields this season, 1861, I thought it worth while to look up the proprietor, and to inquire what kind of manure he had used to restore those impoverished fields to such a state of fertility? "Nothing but wood ashes," was his reply. "I purchase," said he, "all the ashes that I can obtain at eighteen cents per bushel, within a convenient distance of my farm, and it pays well, not only for grass, but for Indian corn and potatoes." On some soils where Indian corn is raised, and where a handful had been applied to each hill, a stranger would find no difficulty in determining at once where the ashes were applied, and where there had been *none* applied.

Ashes cannot fail to be very valuable on most kinds of soil, in localities where the price per bushel is not more than five or six cents, although we seldom perceive such immediate and lasting effects as we met with on such soils as we find in Connecticut—sandy and gravelly loams.

My own experience with wood ashes, both leached and unleached, is, that it is far more profitable to sow them on meadows in the spring, or sow them on any kind of cereal grain, or potatoes, than to sell them, as most farmers are in the habit of doing. Unleached ashes are far better than leached, not only for grain and grass, but for young trees or roots—turnips and potatoes.

When we have sowed wheat or any other kind of grain, where there has been a log heap or brush heap burned down, why does the straw or grain keep erect before it is harvested, much better and longer than it does in other parts of the field? Because there is an abundance of potash in the soil, which is an indispensable ingredient in the formation of the straw; and where there is little or no potash, the straw is almost always very slender, and the grain is very liable to fall down before it is ready to be harvested.

Mediterranean wheat is very liable, on old land in Central New-York, to fall down a few days before it is ripe; and it is owing many times to the want of a sufficient amount of potash in the soil, to give that degree of stiffness to the straw, which is so important to keep it erect until it is fit to cut.

It is a very great mistake among multitudes of pretty good farmers, that there is little or no efficacy in wood ashes. Coal ashes, although by no means as valuable as wood ashes, are worth saving and applying to grass land. I have seen corn growing most luxuriantly on a poor sandy loam soil, which had received a large handful of *coal* ashes per hill; and a man showed me a heavy piece of grass in Greenwich, Conn., which had received only a top dressing of coal ashes, where the grass in 1860, was hardly worth mowing. Ashes, either wood or coal, leached or unleached, should be carefully saved and sowed on meadows. In years past, when the sleighing was good, my team has hauled a great many loads of leached ashes five miles. But it is doubtful whether it will pay to haul *leached* ashes as far as that, except to be applied to certain kinds of soil. But where leached ashes can be obtained within about two miles, for nothing but the expense of hauling them, it will pay well to draw them. But I should prefer to pay six or eight, and under certain circumstances, eighteen cents per bushel, for unleached ashes, than to haul leached ashes for nothing. Their value, for the most part, depends upon the amount of potash in them; and there is but little potash in ashes that have been leached.

S. Edwards Todd.

[For the Country Gentleman and Cultivator.]

STRAWBERRY PEAS.

During my visit in Greenwich, Conn., I met with a variety of very early garden peas, which they call strawberry peas. Those that I saw were about eight or ten inches high; and the pods were very numerous on them. They need no brushing, nor any other support while growing; and to appearance, there were as many pods on them, as on those that had vines four feet high. They come to maturity very soon after planting, and by planting a row or two every fortnight, they have green peas for several months. S. E. T.

The Great Vincennes Pear Tree. — Some of our readers may have heard of this tree. The following statement of one of its crops, is furnished by a correspondent to the Ohio Farmer—"I think I have written you at some time, in reference to the large pear tree in this county, planted where it now stands in 1804. In 1837 it bore one hundred and forty bushels of fruit, and was seventy-five feet across the top, sixty-five feet high, and ten and a half feet girth at the smallest place below the limbs; but two years ago it suffered severely from a tornado, losing two of its principal branches, and now is fast going to decay."

HORTICULTURAL MEMORANDA.

Delaware Grape.—Nearly all the observations made in different parts of the country indicate the extreme hardiness of the Delaware, and that it escaped unhurt where other sorts were killed.

Growth of Maples.—We lately measured the trunks of a row of maples set out 18 years ago in the town of Sennett, Cayuga Co., N. Y., by H. Fellows. They stood by the roadside, received no care, and now average one foot in diameter, and 30 feet high. One was 14 inches in diameter. The sugar maple does not grow nearly so fast as the silver maple—and both would grow faster if cultivated. Large shade trees need not require a life time for their growth.

Champion of England Pea.—Among all the sorts introduced of late years, no variety of the pea appears to exceed, if equal, the Champion of England. Several eminent horticulturists have given the same opinion. Those who have ripe seed at the present time, will therefore be careful to save and *mark* them.

Strawberries.—The Editor of the Am. Agriculturist has received specimens of the Triomph de Gand from J. Knox, the great strawberry marketer at Pittsburgh, in good condition, after 16 hours over the railroad. Some were 5½ inches in circumference. Their quality, as our readers are aware, is excellent. Some specimens of the Austin seedling (Shaker) were received that measured 5¾ inches in circumference. They are not so firm nor so good as the Gand.

Strawberries and Corn.—Joseph Harris of the Genesee Farmer, says that when in Illinois this summer, he was informed at Bloomington that Wilson's strawberry sold at 15 cents a quart, and corn eight cents a bushel!

Cahoon Pie-plant.—This variety, now generally discarded, has been sold extensively for a few years past at high prices, as many of our readers are aware. Dr. Kennicott remarks in a late number of the Prairie Farmer, that it was never worthy of any other notice than for condemnation, and yet, he adds, "more money has been made by selling the plants, and more labor lost in growing them, than with half, if not all, the other American seedlings."

New Rochelle Blackberry.—To have this berry in perfection, it must be left on the bush until it is fully rounded, intensely black, and drops from the stalk by a touch; it will then be sweet and juicy. If taken earlier, even when black, the berries will be hard and sour. The Homestead says, that unlike common blackberries, which are *red* when they are green, these continue *green* after they become *black*.

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[For the Country Gentleman and Cultivator.]

Protecting Animals from Rain Storms.

I believe that farmers, generally, are not aware how much loss they sustain in the flesh of their domestic animals, and how much they suffer during cold storms of rain in the summer, or at any other season of the year. Warm showers never injure animals; indeed, they appear to have a good relish for such a sprinkling as they frequently get, providing it is not as cold as ice. Most animals will endure pretty severe cold, as long as they can keep dry; but, as soon as their bodies have been wet, and are kept wet, evaporation commences. And as evaporation is a cooling process, the heat of their bodies is carried away very rapidly; and the sudden transition from heat to cold chills them in a very short time, and injures them more than a severe storm in winter.

Animals will endure a very sudden change from cold to heat, with impunity; but, sudden changes from heat to cold are often attended with very injurious consequences. We are apt to think because it is summer, or not freezing weather, that a storm of rain will not hurt our animals. But, could they communicate to us their feelings during a storm of cold rain, there would not be so much negligence about protecting them, especially during the cold and stormy days and nights of autumn.

I well remember, that about twenty years ago, there was a severe rain storm in the month of June; and although our sheep had been sheared more than two weeks, we thought they ought to be brought home to the barn. But many of them were so cold and feeble in consequence of the rain, that it was necessary to go after them with a wagon.

About the first July, 1861, there was another very cold storm of rain, which swept away hundreds of sheep in the town where I reside. One farmer lost about sixty of his choicest sheep, although they had been sheared several days before the storm came on. I have heard of more than three hundred lost during the storm.

It is infinitely better for animals, to keep them in a stable or shed, where they can not get a mouthful of food for twelve successive hours, than to allow them to be exposed for only two hours to a storm of cold rain.

When I was accustomed to keep sheep, I was always careful to let them have the benefit of a shed, if they needed it, not only in winter, but during summer; and it was very unusual, that our horses and neat cattle were left, for one hour in the field, during a cold storm. Cold storms not only make horses *look* bad, but they do really injure them, by rendering them stiff and dull; and they often contract severe cold, which many times, will superinduce catarrh and glanders.

Young calves and colts often suffer extremely from exposure to cold storms, even in summer; and to shelter them, will be time and money well appropriated. "A merciful man regardeth the life of his beast." S. E. T.

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[For the Country Gentleman and Cultivator.]

Remedy for Cows Sucking Themselves.

Eds. Co. Gent.—I see in the Co. Gent. of Aug. 6, an article on self-sucking cows, and as a remedy splitting the tongue. Now if my experience is worth anything it is at your command.

Nearly forty years ago I had a fine ox about five years old, and very suddenly in the winter our milch cows, I think three in number, ceased to give milk, and soon the difficulty was discovered, for lo! the ox did the milking. A neighbor told me to split his tongue, which I did, for about two inches in length. It did not appear to injure him. In three or four days he ate as freely as ever, but his sucking was done; it was effectual. I never had another case. J. Bowman. *Baldwinville, N. Y., Aug.* 3.

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[For the Country Gentleman and Cultivator.

The Durability of Mulberry for Fence Posts.

Nine years ago I spent a few weeks in Connecticut, and Capt. J. Peck, Greenwich, showed me a mulberry post which had been standing on one side of his barn-yard for more than forty years. As I was visiting him in the month of June, in 1861, I inquired more particularly about that post, which is now standing in the same place. It was a green post, about eight inches square, when it was first set; and although it stood in a very unfavorable place to put its durability to a fair test,—where manure was piled around it during more than half the year—still, it stood more than fifty years, before it rotted off near the surface of the ground. It has been re-set, as it was a tall one, and as it is now well seasoned, it will without doubt last sixty or seventy years longer.

Were mulberry posts thoroughly seasoned before they are set, and smeared with a good coat of coal tar near the surface of the ground, they would doubtless last one hundred years, or even more. S. E. T.

Inquiries and Answers.

Plum on the Peach.—Will you be so kind as to inform me, through the columns of the Country Gentleman, what the advantage is in working the plum on peach stocks. I purchased some plums two years since of an eastern nurseryman, which prove to have been worked on peach; do they grow as thrifty, do they come into bearing as soon, do they bear as abundant, and do they last as long as those worked on plum? H. W. P. *Oregon, Mo.* [The practice of working the plum on the peach, which prevailed to some extent several years ago, is generally condemned by fruit-growers. A few sorts succeed in this way—we have seen a bearing Imperial Gage, several inches in diameter, and in a thrifty condition, which had been thus propagated, but such instances are probably less than one in a hundred. Attempts were made by some nurserymen to induce the plum to strike roots of its own, by banking up the stem with earth, but it rarely succeeded. While therefore, a very few sorts of plum might do well for a time, as a general rule such trees prove failures.

Reclaiming Bogs.—I have a portion of bog-land—how can I best clear off the coarse plants, and will it raise vegetables? It is not very wet, and no water stands on it. Subscriber. [It will be absolutely necessary to drain it; water often does great harm beneath the surface where none is visible. Cut out the coarse growth when well dried, by a sharp spade, if on a small scale, or with a steel plow, if the field is large, and make compost heaps of it. Manure and a little ashes, applied to such reclaimed bog, will raise all vegetables of a succulent nature, or which have a large growth of leaves, such as cabbages, turnips, pumpkins, pie-plant, corn, &c.]

Swine.—A Subscriber would be pleased to learn through the next No. of The Cultivator—1. At what age do young sows first litter? 2. Can swine and progeny be well and advantageously kept on the rear of a city house lot, without being a nuisance, or do they require a larger field of action? 3. Where can the true Suffolk pigs be bought? 4. Is that the best breed to be kept in a city? A. B. *Albany.* [1. A sow will sometimes produce young at ten months; at twelve more frequently; and as a general thing they should not be put to the boar under about a year. The period of gestation is three and a half to four months. 2. An affirmative answer may be given, provided the city lot is large enough, and the attendant is of cleanly habits. We do not refer to personal cleanliness, but to a habit of keeping the apartments of animals in perfect condition. The rear of some city lots inhabited by human beings, is worse than many pig-styes. The hog himself dislikes dirt, and only suffers it as a choice of evils. If the pig-pen is cleaned and washed at least twice a day, the labor will be very small, and very little odor will ever be perceived. The labor will be repaid in the increased thrift of the animals. Refuse matter should be constantly mixed with some absorbent, as coal-ashes, charcoal, dry soil, &c., and will make a valuable garden manure. 3. Suffolks may be had of the Messrs Stickneys at Boston, and others. 4. The Suffolk and Berkshire are probably the best breeds, or crosses from them with more common animals. We have found that a half blood Berkshire, (a cross with native swine) would give twice as much pork for a given amount of food, as the natives alone. A hog is a most profitable animal for a family, consuming much refuse food to great advantage. If fed with grain it should always be ground; and no food given should be much diluted with water, as this makes big bellied and poor animals.]

Rupture in a Colt.—My father has a fine colt about seven weeks old that has a rupture in the scrotum, supposed to have been caused by an attempt to get up soon after he was foaled. At times it is as large as a goose egg, and at other times is drawn up so it is not visible. Can you Messrs. Editors, or any of your readers tell us what can be done to save him, and oblige us? G. W. L. *Torrington, Ct., July 19th,* 1861. [We have never met with a rupture of the kind described, and the only information we are able to give, is contained in the following note by Spooner to Youatt's Treatise on the Horse:—"In congenitial hernia (that appearing at birth), in the testicle bag, the remedy consists in castration by the covered operation, that is, without cutting into the hernial sac, but placing wooden claws on the cord and the peritoneal membrane, and at the same time forcing the gut gently upwards towards the abdomen. In the course of a few days the testicles will slough off, or may be removed. The writer purchased a colt a few years since for a trifle, being abandoned by its owner as worthless, on which the operation was successfully performed, and the colt sold afterwards at a good price."]

Aphides on Wheat.—The enclosed head of wheat is a specimen of a whole field of spring wheat. When picked, the insect adhered to the root of the kernel outside the husk; it is about a week since I discovered it. Please inform me what they are, and also if injurious to the wheat? J. W. [The head of wheat and its insects being simply enclosed in a letter, they came much broken or crushed, but enough appeared to show them to be similar to the aphides spoken of on page 32, No. 2, of the Co. Gent., and the same remarks will apply here. Aphides, when in great numbers, injure or destroy vegetable growth by sucking out the juice, and these might prove destructive in the same way, should they multiply and become sufficiently numerous.]

Charcoal—Manure.—Will you give me information on the following points through The Cultivator. 1. As to the best way to convert brush, old rails and other refuse wood, into charcoal for absorbent purposes. 2. I am about preparing a compost of night-soil, chip dirt, hen manure, leaf mold, &c., to apply to a small fruit garden next spring; would you omit the space intended for strawberries or not? C. N. B. *Preble Co., Ohio.* [Make the refuse into a pile, cover it slightly with earth as in a common coal pit, fire it, and admit air enough to make slow combustion. Unless the land is already quite rich, we would give it a moderate manuring for strawberries, especially if of the most productive sorts, such as Wilson's Albany and Early Scarlet, for instance,]

Getting Rocks Out for a Well.—What is the best way to dig or tear out the slate rocks in my well, about four or five feet deep in the rocks? Blasting does no good, only throws a small piece up, and digging up with a pickaxe is very hard and slow work. B. [Can any of our readers reply?]

Embree's Butter Worker.—Do you know anything of Embree's Rotary Butter Worker, advertised by Paschall Morris? The statement that twenty pounds at a time can be worked in three minutes appears so extravagant that I hardly credit any of it. If you, or any of your readers, have had any experience with it, I would like to have your opinions in the Co. Gent., whether favorable or not, as to the rapidity, ease and thoroughness or work, ease of keeping clean, &c.—also the price of the machine, and the nearest place where it can be bought. Wm. F. Bassett. [We have seen this Butter Worker, and should think it might easily do all that is claimed for it by its manufacturers. As a labor-saving invention we formed a favorable opinion of it, and heard the highest satisfaction expressed with its practical operation.]

"Chain Stump-Puller."—*Robt. F. Fowler, California,* wishes to ascertain who is the patentee of a stump-puller under this or a similar name, but his description is so imperfect that we cannot tell what one refers he to. He wants to know the price for patent-right for an individual or a county His address is at *Sonoma,* and any parties desiring to correspond with him, can write to him directly at that place.

Hydraulic Rams.—One of your readers asks of hydraulic rams. My partner says, having had experience, that any fountain head of one gallon per minute, will drive a small ram, lifting the water ten feet for every foot fall. We are busily engaged putting in a No. 3 ram where we have a fall of 13 feet, by digging a ditch 220 feet long, which averages six feet in depth; and the height for the water to be raised is 100 feet—the distance carried 900 feet. If he will wait a mon'h he can have the benefit of our experience.

Doniphan Co., Kansas. ED. RUSSELL.

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[For the Country Gentleman and Cultivator.]

THE GRAIN APHIS AND LADY-BIRD.

A species of Aphides made its appearance on the oats in this neighborhood about the 18th of July. It was of a reddish brown appearance, and after a short time they assumed the form of a fly with wings. They gathered in clusters around the stem connecting the grain with the stalk, and deprived the grain of the juices necessary to its development. The larvæ of the lady-bird were very numerous, and I never had such an opportunity of observing its habits. It is a pale blue insect with reddish spots along its sides, and it is quite an interesting sight to observe it seize upon these aphides and devour them, and then to watch its transformation into the beautiful lady-bird. I have been truly delighted in observing the changes it passes through; fastening itself to a leaf, the skin of the larvæ bursts open, and a reddish bug appears that gradually takes the form of a perfect lady-bird.

Hunterdon Co., N. J. J. W. L.

THE CULTIVATOR.

ALBANY N. Y., SEPTEMBER, 1861.

☞ July 25th and 26th we spent in Duchess County, where we found the Haying nearly completed, the Rye much of it cut, the Oats promising a fair yield, though very short in the straw, the Corn somewhat backward, and Fruit almost wholly cut off, but the character of the Season, as a whole, rather favorable than otherwise. The Grass crop particularly is a heavy one—Mr. Thorne said the heaviest that has been cut for years at Thorndale. An insect has appeared in that vicinity quite suddenly and in large numbers, within a few weeks past; red or reddish brown in color, fixing itself at the lower end of each grain in the Oat heads, and to some extent in other Grain, and apparently eating into the berry, although the amount of real damage it is capable of doing has not as yet been tested. We have sent samples to Dr. Fitch for his examination. Mr. Thorne will soon have a field of barley thrashed out, in which it was also quite thick, and we shall then be apprized farther of what it can accomplish. There appears to be a new insect coming out just now on the grain in several other localities—very likely the same one; an item in the newspapers informs us, for example, of its being very abundant on the wheat in Franklin county, Mass., and we hope to have samples soon from there for Dr. Fitch to investigate.

— The Thorndale Short-Horns, it need scarcely be said, are looking their best; although many of his most noted imported animals are still in their prime for service, the gems of the whole at present, to our eye, are those of Mr. Thorne's own breeding; and, in passing from box to box, and from field to field, we were re-assured in the conviction that no inducement at home or abroad will tempt him to part with anything which the future of the Herd is not abundantly able to spare. The heifers that will soon be coming on as breeders, for instance—to go no farther—are a very strong class in themselves—witness such as "3d Lady of Oxford" and Lalla Rookh's "Light o' Love," sisters respectively to the "4th Lady" and "American Cousin" lately exported. With the last Autumn's importation of South Downs—the dozen of Babraham ewes, and the "Archbishop," which latter a twelvemonth ago carried away the first prize among the Canterbury "shearlings"—a class which constituted, said the Farmer's Magazine, the strength of the Royal Show, and formed the most "correct illustration" Mr. Webb had ever given "of what the South Down should be"—together with the very stylish Rigdon ram—we now made our first acquaintance; but we regarded with no less interest a pen or two of yearlings of Thorndale breeding, which largely owe whatever superiority they possess, like the young things among the cattle, to the skill and care that have been shown in the land of their birth.

At the residence of Isaac Merritt we found an Isabella vine over thirty years of age, of enormous size and great productiveness, that is really a curiosity. Mr. M. propagates Vines of all the newer sorts upon a considerable scale, and both his grounds and propagating houses evinced the careful management for which he enjoys a wide reputation. He has also a Vineyard of eight or ten acres, which has now been in bearing, in part or in whole, for two or three seasons back. He has been in the habit of preserving the Grapes for sale during the winter by carefully packing the best in tea-chests between layers of cotton, and storing them in a dry place at a low temperature; obtaining for them by the Holidays from 35 to 50 cents a pound at wholesale. Mr. Isaac Haight has also purchased grapes from this vineyard for Wine making, and we tested a very pretty sample of Isabella from his last vintage.

At Wassaic we went to see Mr. Gail Borden's process of Condensing Milk, of which a recent notice was given in these columns. The strict attention to neatness, not less than the simple nature of the operation,—and the advantages of reducing the bulk, increasing the keeping quality, and securing the richness and purity of milk, for city consumers, are such as to commend the milk, supplied by Mr. B. to the attention of all who can get it. At present he is not engaged in any other manufacture, but hopes to secure the preparation, for the Navy, of his condensed Coffee, and ere long to perfect an improved system of putting up Meats for long voyages or other purposes, without the employment of salt or liquids to harden the texture and extract the juices.

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☞ Many are the Notes of Inquiry that come to us from near and far, with regard to the New Insect on the Grain. The River counties send us samples, and not the Hudson's banks alone, but likewise those of the Connecticut, through the State that bears its name, up into Massachusetts on the north, are overrun with swarms of this invader. We hear of it in Warren, Clinton, Otsego, Schenectady, and Saratoga; and everywhere it seems to be an entire stranger. Wheat heads full of it, packages in papers, and parcels in boxes, envelopes and quills, have reached us by mail and by hand, from all the above and other points, with letters too numerous to publish; but as all the insects that have reached us of late, have been of this one sort, all the correspondents referred to will please understand that this is intended as a general answer to the one common question—What is it? Several samples we have sent to Dr. Fitch, who has not as yet answered us directly, but the following letter from him to Col. Johnson, covers precisely the ground required:—

Salem, N. Y., July 26, 1861.

Hon. B. P. Johnson—The insect on wheat heads which you send me is a species of plant louse named the Grain Aphis (*Aphis Avenæ*, Fab., *A. granaria*, Kirby and Curtis.) It is the same insect which I mentioned to you last week, being sure it would be brought in to you by some one eager to know what it was. I never thought it of much consequence till this year. The grain fields hereabouts are all infested, and many of them are thronged with it, and it appears to be attracting notice everywhere through the State. As the wheat, rye and barley become ripe and juiceless it forsakes them and gathers upon the oats, as these are then green and succulent. Thus the oats are liable to be more overrun and injured by it than either of our other grains. It clusters at the base of the chaff in which the kernels are enclosed, and sucks out the juices that should go to mature the kernel. Hence when it is so excessively numerous as it now is, the grain will be shrivelled and light of weight.

Ichneumon flies, Syrphus flies, Lady bugs, and other parasitic destroyers are actively at work upon these grain lice, and will probably have them all so subdued that they will not trouble us again next year.

Tobacco smoke, which is so effectual in smothering the lice on rose bushes and other garden plants, of course cannot be applied to a whole field of grain. The gas from chloride of lime may perhaps be equally efficient in smothering them. I told a neighbor to get some of this and dust it over a small piece of his wheat, (avoiding to breathe the fumes from it,) repeating it again next day if necessary, and in a day or two more he could see if it killed or banished the insects from the spot to which he applied it, sufficiently to render it worth while to extend it to the whole field. But he was not able to find any of this article in our stores here that was diliquesced, and consequently unfit for this use. If any one else is disposed to try it, let him inform us of the result.

ASA FITCH.

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☞ An agricultural library association has been organized at Lee, Mass., by choosing the following officers: Alexander Hyde, president; E. Flint, Jr., vice-president; Isaac C. Ives, secretary; and Benjamin Hull, librarian and treasurer. Similar associations have also been formed at Stockbridge, Lenox and Pittsfield.

☞ In a note after a recent visit at Thorndale, we mentioned the abundant appearance of the *Grain Aphis* in the fields of Barley and Oats. We are informed by Sam. Thorne, Esq., under date of Aug. 6th, in response to the inquiries we then made,—that "the barley in question has since been thrashed, and the oat crop all harvested. The general opinion in this vicinity," he remarks, "is that they have not done very much damage; and the belief that they cut off the oat where it joins the stalk, which all our farmers express—has not been sustained in the various examinations I have made. I am more inclined to believe, judging from both the barley and oats, that they take up the sap that supplies the developing grain, and thus make it much lighter. I could not discover a single head where the grain had the appearance of being cut off; but the grain thrashed from the field that had the most show of the insect, *was very much lighter than the rest.* Now that the grain is cut, the little fellows are looking up new feed, and one of my turnip fields swarms with them."

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Crops in Western New-York.—I have just taken a ride through portions of Cayuga and Seneca county, and have found farmers mostly in the midst of harvesting. The Wheat crop generally has been better than many feared would be the result earlier in the season, but still it is not more than two-thirds of an average product—some put it as low as only one-half. The Mediterranean wheat was badly winter-killed—the Soule wheat, on the best land, tile-drained where necessary, has been by far the best. Many fields were observed of the latter variety, that would unquestionably yield 30 bushels per acre. The midge is evidently decreasing, but it has sometimes totally destroyed poor crops. Spring wheat is uncommonly good—a large quantity was sown, and it will probably average twenty bushels per acre. The variety is mostly the China Tea wheat. Oats are abundant—crops heavy, and not much beaten down. Corn is rapidly improving under the hot weather, and will have a fair "chance" to ripen well. Many fields appear as well as usual, while many others are quite poor. Hay crop has been tolerably productive—many meadows yielding one and a half to two tons, and a very few even as high as three tons.

The fruit crops are very small—pears almost none—scarcely a peach—apples about one-third or one-fourth the average. Those who have wisely set out plenty of small fruits are now obtaining plentiful supplies of currants, raspberries, and gooseberries, and the Rochelle blackberry is just beginning to ripen in fine trusses. Strawberries have been numerous, but small in size, from drouth.

J. J. T.

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The Auburn Reapers.—The city of Auburn, N. Y., stands in the midst of a very fertile farming region, and for a town of 10,000 inhabitants is largely engaged in the manufacture of agricultural implements. There are four mower and reaper manufactories, viz., one for the Kirby machine, manufactured by D. M. Osborne & Co.; another for the Hussey; a third for the "Cayuga Chief," made by Sheldon & Co., and the fourth for Bal'ls, made by Ross, Dodge & Pomroy. Several trials of these machines have been made in different parts of the county, and all have proved very successful. In some instances the committees to award prizes have been puzzled to decide between them, and have handed back the entrance fees to the owners, and made no award. The dynamometer has shown varied results, sometimes in favor of one, and sometimes for another, the average being not widely apart. In mowing, cutting about 5 feet, 300 lbs. has been about the draft required, some below, and others above. On our own grounds we have had an opportunity of trying the Cayuga Chief of Sheldon and Co., and found it to work to much satisfaction. It could be made to cut *within less than an inch of the earth*, if desired, and its height of cutting might be increased to any degree. A piece of rough and sidling ground being selected, it proved itself equal to sustaining the rough usage required. It would cut perfectly when the horses were moving at the rate of only one mile an hour, or less, and did its work well in turning a circle of less than 6 feet radius. The horses appeared to draw it very easily, nearly as much so as they would draw an empty wagon. This remark applies especially to the small sized mower, the draught of which is exceedingly light. It has a peculiar and useful arrangement for elevating the points of the fingers at a raised angle to pass over stones. It is made of iron, and is strong and durable. Doubtless the other machines mentioned, or a part of them, are its equals in most particulars, but we had not the opportunity of testing them so well.

J. J. T.

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☞ The official returns for the twelve months preceding July 1st., show that during that period the United States added to its stock of specie $42,000,000 from foreign imports of specie, to which must be added $10,000,000 of gold received from California, beyond the amount exported, making a total increase in the amount of specie held in this country, of no less than $52,000,000 owing to the deficit in the European and the abundance of the American harvests. This proves the money value to the country of a good season, and also illustrates the pecuniary importance of *good farming*—the primary object of which is to render the farmer constantly more and more independent of the ordinary vicissitudes of season, by bringing his land into the best condition to resist drouths or drain off excessive moisture—by doing all things in their proper time, that nothing may be left unattended to if frosts should come sooner than anticipated—by giving each crop such a vigorous start from the richness of the soil and careful attention at planting time, as best to strengthen it against attacks of insects or the growth of weeds,—and, finally, by farming upon such a system that the land shall constantly be the better and the yield "in a poor season," if possible, fully equal to the average now obtained in a "good" one. If this definition of the object of "good farming" is a tolerably comprehensive one, we might point to some farmers in our acquaintance who are every day nearer and nearer its achievement. Such farmers, we may add, with scarcely an exception, *read the Agricultural papers.*

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☞ Mr. W. O. Hickok of Harrisburgh, Pa., requests us to say through the Co. Gent, that he would be very greatly obliged if agricultural implement dealers and his friends in various parts of the country, will inform him of the situation of the Apple crop; address as above. Those interested will also please observe that in the advertisement of "Hickok's Cider Mill," in another column, the price, heretofore published at $50, should read *forty dollars*, as corrected this week.

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A Good Idea for Agricultural Societies.—At the last exhibition of the Chester Co., Pa., Ag. Society, premiums were offered for the best collections of "Pernicious Weeds and Plants," that might be submitted for competition. This strikes us as an excellent plan for encouraging farmers and especially farmers' sons in acquainting themselves thoroughly with the characteristics of these intruders, as well as calculated to lead to the study of Botany in other branches. It appears from the report of the Committee appointed to award the premiums, that four collections were presented—two of them "arranged in groups of *Natural Families*, and affixed in convenient volumes with the proper *names* of the plants attached; numbering respectively 198 and 126 specimens — the other two unarranged and comprising respectively 108 and 32 specimens. Dr. Darlington, chairman of the committee, concludes his report with suggestions worthy of attention on the part both of individuals and societies. After remarking, that "this is believed to be the first instance of an exhibition in this county, where *weeds* have attained to the importance of an official notice," he adds:—

"Weeds may be defined to be, Plants of spontaneous growth, which are either *pernicious* (i. e. poisonous in their properties, injurious by reason of thorns or prickles, or choking out useful plants, by exuberant growth,) or merely *worthless* in Agriculture, as cumberers of the ground. Every good, tidy farmer, is careful to eradicate such plants, or to keep them in due subjection. Of course, his first step in the process, is to learn to *know* them when he sees them. He cannot satisfactorily talk or write about them, without employing *names;* and every intelligent person should be able to use appropriate and approved terms, when treating of objects. Specimens of all vegetables concerned in Agriculture and Horticulture (*weeds* as well as *useful* plants,) should be neatly prepared—arranged in natural groups—and kept in convenient, indexed volumes, in the Library of the Society, for the use of the members. In that way, the volumes could be consulted, and the plants become known, with the same facility as words are learned in a Dictionary."

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☞ Our last foreign exchanges come to us with column after column crowded with the results of the "DISPERSION OF THE BABRAHAM SOUTH-DOWNS"—an event only second to the great Show of the Royal Society itself, in importance and interest. Indeed, the high character, increasing value, and "long prices," which make JONAS WEBB's breeding flock conspicuous in our day, really date back to a period "almost coeval with the existence of the Royal Agricultural Society. As the one looked up, the other looked up—as the one extended its influence, the other enlarged the circle of its visitors, until the catalogues of the Society told what Jonas Webb did at the "Royal" meetings, and the catalogues of the Babraham ram lettings echoed what had been issued under the authority of Hanover-square."

The attendance at the great sale, is mentioned by different reporters all the way from 1,500 to 3,000, comprising, beside the owners or representatives of probably nearly every South-Down flock of any distinction in the kingdom, many foreigners from Germany, France, the United States, Buenos Ayres and Australia. In all 968 sheep were sold; 99 two-year-old and aged rams fetched 3052*l.* 7*s.*, 109 shearling rams realised 2710*l.* 1*s.*, 199 shearling ewes made 2203*l.* 19*s.*, 105 two-year-old ewes were sold for 813*l.* 15*s.*, and 455 older ewes realised 2142*l.* The whole of the Babraham flock above the age of lambs was thus disposed of for the sum of 10,922*l.*, averaging 11*l.* 5*s.* 8*d.* apiece.

Of the 1st lot, the two-year-old and over rams, there were three sold for 100 *gs.* or over, Mr. J. C. TAYLOR of Holmdel, N. J., heading this list and going far "to the fore" of any other price, for "No. 89"—which was struck off to him at 260 guineas (say $1,300) after a sharp competition which is spoken of as the "great event of the day," Mr. RIGDEN's name being mentioned among Mr. TAYLOR's prominent competitors. The next highest was "No. 86," sold for 125 *gs.* to go to France, and "No. 22" bought for the Duke of Devonshire at 100 *gs.* In the other class of rams, the shearlings, there were only two that attained the last mentioned figure, "No. 107," sold to a Mr. FARQUHARSON for 110 *gs.*, and "No. 109," of which Mr. J. C. TAYLOR was the purchaser, at 100 *gs.* Mr. T. also bought "No. 106" at 55 *gs.*

Of the Yearling Ewes, which were sold in lots of 5 and 10 each, "lot 6," consisting of 5 head, were sold at 34 *gs.* per head—said to be the largest price ever obtained for a similar number in the history of the breed. Two lots in this class, of 5 each, (Nos. 7 and 10,) were sold to come to this country, Mr. DULANY, whose residence is not given, being the purchaser. Of the Two-Year-Old Ewes, the highest priced pen of 5, (No. 27) was bought at 13½ *gs.* per head, for Mr. SAM. THORNE, who also became the purchaser of lot 31, 5 ewes at 12 *gs.* each. In this class, Mr. J. C. TAYLOR was again a buyer, taking lot 30 of 5 head at 7½ *gs.* each.

The foregoing comprises all the purchases made for this country, according to the published accounts, and we see nothing specially remarkable in the sales of ewes in the different classes not included above. Among the English buyers or spectators the following names will be recognized as breeders or agriculturists, here as well as at home:—The Duke of Newcastle, Lord Feversham, Lord Sondes, Lord Braybrooke, Lord Yarborough, the Duke of Richmond, Messrs. H., J., S., and T. Webb, Lugar, Rigden, Crisp, Clayden of Littlebury, Nisbet Hamilton, Hudson of Castle Acre, Barthropp, Noaks, Lord Winchelsea, Neville Grenville, the Sextons, the elder Garrett, the Overmans, Colonel Hood, Giblett, Clover, Valentine Barford, the Ransomes, Fisher Hobbs, William Torr, Charles Howard, Charles Barnett, Sir Robert Pigot, Sir Thomas Lennard, Jonas, and many others. Indeed it seems to have been a sort of general agricultural congress.

The purchases for the United States, according to the reports above condensed, may be repeated in tabular form:

PURCHASES OF J. C. TAYLOR, HOLMDEL, N. J.

Two-year old Ram, No. 89,	260 guineas.
Yearling Ram, No. 109,	100 do.
do. do. No. 106,	55 do.
Pen of 5 Two-year old Ewes, No. 30,	37½ do.
Total, (say $2,260,)	452½ do.

PURCHASES OF SAM. THORNE, WASHINGTON HOLLOW, N. Y.

Pen of 5 Two-year old Ewes, No. 27, at 13½ gs.,	67½ guineas.
do. do. No. 31, at 12 gs.,	60 do.
Total, (say $635,)	127½ do.

PURCHASES OF MR. DULANY.

Two Pens of 5 Yearling Ewes, each, Nos. 7, and 10, at 13 gs. each—total 130 guineas—say $650.

Aggregate of prices paid for 28 South-Downs coming to the United States, say, $3,545.

The average per head was thus $126 for those brought to this country, or more than double the average of the whole sale, which, as above stated, was a fraction over £11, say $55 per head.

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☞ We recently acknowledged the receipt of samples of *Stone-Ware Milk-Pans* from D. E. HILL, Middlebury, O., who manufactures the Stone Water-Pipe advertised in another column. In answer to our inquiries as to their price and process of manufacture, Mr. FRANK ADAMS writes us:—"The pan is made entirely by machinery driven by water-power. The clay is ground, and formed into a ball of the right weight, thrown into the machine, and comes out a perfect pan, at the rate of about five a minute. The arrangement of the machine is such that the clay is packed very close, and consequently forms a much closer *body* than can possibly be done by "hand-turning," and making every one exactly alike, and of the same weight. The price per hundred, at the shop, is *six dollars.*"

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☞ The "Universal" Exhibition and Trial of Mowing and Reaping Machines, held in the Haarlemmermeer Polder, by the Dutch Society of Agriculture, on the 28th and 29th of June last, resulted in the complete success of Machines of American origin. This *polder* or drained marsh contains at the present time some 9,000 bunders (about 4,500 acres) reclaimed as grass land; there appear to have been eleven machines in competition from seven different makers, and the decision as to the prizes was to this effect:

"First prize of 250 guilders, to the joint grass-mowing and reaping machine of Burgess and Key, on Allen's system, for two horses, exhibited by Messrs. Keyser and Swertz.

"Second prize of 200 guilders, to the grass-mowing machine on Wood's system, for two horses. As two of these machines were exhibited, both of which worked equally well, this prize was divided between Messrs. G. Stout of Tiel, and W. M. Cranston of London.

"Third prize of 50 guilders, to the joint grass-mowing and reaping machine of Burgess and Key, for one horse, exhibited by Messrs. Keyser and Swertz.

"Messrs. Burgess and Key therefore take precedence, precisely as they did last year."

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BAKED CORN PUDDING.—To one teacupful of corn meal add one quart of milk, three eggs, and a little ginger. Bake one hour.

☞ Mr. Secretary **Klippart** of the Ohio State Board of Agriculture, has furnished a number of interesting documents to the editors of the **Country Gentleman.** In a private letter accompanying them he gives a return in round numbers of the two great crops of that State for 1860, based upon the State statistics now partially tabulated, together with an estimate of the Production of the present season, 1861—both of which we give below, in connection with the actual yield reported in 1858 and 1859:

	Returns of 1858.	Returns of 1859.	Estimate, 1860.	Estimate 1861.
WHEAT,.	17,655,483 bush.	13,349,967 bush.	30,000,000	30,000,000
CORN,...	50,863,582 "	68,730,846 "	90,000,000	75,000,000

The Wheat crop of 1859 was sadly injured by the disastrous frost of June 4, the average yield being but about 7⅛ bushels per acre that year; the largest crop ever reported was that of 1850, of 31,500,000 bushels, or 18 bushels per acre. The average wheat crop of the State for the ten years preceding 1860, was *twenty millions of bushels per year*, (exactly 20,016,460,) so that the estimate above given for 1860 and 1861, is 50 per cent more than "an average," provided a period of ten years is long enough to fix the meaning of this uncertain term.

The largest Corn Crop ever reported was that of 1855, 87,587,434 bushels, or very nearly 40 bushels per acre. The average Corn Crop of Ohio for 10 years preceding 1860 was *sixty-five millions of bushels per year*, (exactly 64,910,358,) so that the estimate for 1860 is very nearly 40 per cent. more than "an average," while the estimate for 1861, if realized at harvest, will be considerably above it.

It is curious to notice in connection with the Corn Crop, that for ten years preceding 1860 there had been a regular alternation of a low crop in the even year, with a good one the odd year. The average crop, for example, for each of the five even years, 1850, '52, '54, '56 and '58, was 55,124,554 bushels, while the average for each of the five odd years, 1851, '53, '55, '57 and '59, was 74,696,162—a difference in favor of the latter, averaging twenty millions of bushels a year. But the season of 1860 comes in to break up this regularity of good and bad crops, by a return unprecedentedly great.

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☞ A sale of Improved Stock recently imported by Mr. **Simon Beattie**, took place near Markham, C. W., the 1st inst. The prices realized and purchasers were as follows:—

Short-Horn bull Baron Solway—John Snell, Brampton, ...	$250
do. Heifer, in calf to "Gen. Havelock." H. Jennings,.	350
Galloway Heifer, Blooming Heather, John Snell, ...	320
Ayrshire Cow, W. Ingles, Markham, ...	165
Six Yearling Leicester Rams were sold at from $95 to $120—averaging $108—aggregate, ...	648
One three-year old Cotswold Ram, ...	120
Two yearling Cotswold ewes, ...	98
do. do. do.	80
Two yearling Leicester ewes, ...	229
do. do. do.	100
do. do. do.	62
One do. do, ...	30
	$2,452

Mr. **John Snell** was the purchaser of the two highest priced Leicester ewes (for $229,)—also of the two highest priced rams of the same breed, respectively at $118 and $120 each.

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☞ The Madison County, Ohio, Monthly Stock Sales have several times been reported for us by a correspondent. They are of special interest as showing that some system of Market Fairs, properly adapted to the real wants of our Farmers, only needs to be once well understood in order to become popular. The local paper gives the following as the prices obtained this month—the offerings being fair, but sales naturally sluggish:

27	Yearling Steers,	weight,	600	pounds,	sold per head at....	$12.80
15	Two-year olds,	do.	1,000	do.	do.	22.00
5	Three-year olds,	do.	1,100	do.	do.	24.12
24	do.	do.	850	do.	withdrawn at, ...	15.00
8	do.	do.	1,000	do.	do.	20.50
45	Two and 3 y'r olds,	do.	1,100	do.	do.	22.50
50	Yearling Steers,	do.	700	do.	sold at, ...	17.05
10	do.	do.	825	do.	do.	18.50
24	Two-year olds,	do.	800	do.	withdrawn at, ...	16.50
1	Six-year old Ox,	do.	1,500	do.	sold at, ...	46.25

☞ The "racer" breed of Pigs has been often satirized. Seldom, however, more forcibly than by a talkative Yankee in a story narrated in the last *Atlantic Monthly*—the author of which must surely have a turn for practical farming, as well as an exceedingly graceful pen, and a happy knack at depicting character, whether of pig or human, in a clear and forcible light. Of which latter trait our swinish hero shall be an example;—"As to fattenin' on him," says Israel,

> "I'd jest as soon undertake to fatten a salt codfish. He's one o' the racers, and they're as holler as hogsheads; you can fill'em up to their noses, ef you're a mind to spend your corn, and they will caper it all off their bones in twenty-four hours. I believe ef they was tied neck and heels an' stuffed, they'd wiggle thin betwixt feedin' times. Why, Orrin raised nine on 'em, and every darned critter's as poor as Job's turkey to-day; they a'nt no good. I'd as lieves ha' had nine chestnut rails, and a little lieveser, cause they don't eat nothin'."

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Produce Trade at Milwaukee.—The receipts of Wheat at Milwaukee in 1860, amounted to 9,108,458 bushels—Flour, 597,118 barrels—Oats, 178,963 bushels—Corn, 126,464 bu.—Barley, 109,795 bu.—Rye, 52,382 bu.—Grass Seed, about 15,000 bu.—Wool, 659,375 lbs.—Hides, 85,000.

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☞ It is stated that Gov. **Wright** of Indiana, who recently returned from his late post at Berlin as United States Minister to Prussia, brought with him, for his own farm, a number of Saxony and Merino sheep.

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☞ Gov. **Seward's** Arabian Horses will be exhibited at the State Fair at Watertown this year.

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☞ Gen. **Van Rensselaer** last week showed us a fine *Pine Apple* grown under glass at the Manor House, weighing *five pounds*. Such success is rarely met with except by gardeners of long experience in this particular direction.

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☞ In order to relieve the embarrassment of those who hold lands of the Illinois Central Railroad, in being unable at present to dispose of their grain and meet payments now due,—notice was given by J. W. **Foster**, Land Commissioner, under date of June 28th, that the Company would thereafter receive corn in payment of notes for land, as follows: No. 1 white, 20 cents; No. 1 yellow, 19 cents; mixed 17 cents—delivered on the ears at the nearest station. All unsound corn sold at Chicago on account of the owner.

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Entomological Pins.—These pins, of German manufacture, may be had of S. S. & W. Wood, 389 Broadway, New York, who also keep fine plates of cork, for lining the insect cases, to receive the pins. These pins, a specimen of which we have recently received, are a beautiful article, being long, slender, and of high finish, and do not injure even very small beetles when driven through them. Two or three dollars worth of cork and pins, by express, will give the young scientific farmer a fine start in preserving specimens of insects.

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Adams Co., Pa., Agricultural Society.—We are preparing for our annual agricultural exhibition, which takes place Sept. 23—26. Our list of premiums will be respectable. Our officers are **John Burkholder**, President; Jacob Ditzer and Wm. Walhay, Vice Presidents; George Wilson, Recording Secretary; Wm. B. Wilson, Corresponding Secretary. Competition open to the world. We have about five acres of ground beautifully situated, with good spring water on the ground, and all necessary buildings for the comfort of man and beast. W. B. W.

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☞ It is the intention of the French Government to hold an International Exhibition of Fat Stock at Poissy during the first week of April, 1862. It is proposed that in addition to the prizes for Steers and Wethers, to which in 1857 the prizes were confined, there shall be prizes for Fat Cows.

☞ A Washington dispatch under date of August 3, states that Isaac Newton of Pennsylvania, has been appointed Chief of the Agricultural Bureau, Patent Office.

[For the Country Gentleman and Cultivator.]

STRAWBERRY CULTURE.

From this time to October next is a suitable season to transplant strawberry plants. Some growers of this plant claim that the month of August is preferable to a later period, for the reason that the plants acquire a greater growth and are better rooted than when planted in September and October. That is true; but there is this disadvantage in early planting, the weather is generally so warm and dry that many of the plants are liable to die if not frequently watered, which with large plats is quite troublesome, and in field culture quite impossible. I have succeeded in the culture of strawberries by setting the plants the first week in October, but it is not safe generally to wait till that time, and I recommend any time from August 15th to September 15th.

From considerable experience in growing strawberries, and from extensive reading of the writings of those engaged in the business, both for family use and market consumption, I am fully convinced that the cheapest and easiest way to produce good crops is by adopting the *row* system instead of hills. However, some varieties of plants produce larger fruit on the hill system; but there are kinds that are very prolific bearers in rows, or when the ground is covered with a compact mass of plants. Wilson's seedling will bear enormous crops in this condition, even where the plants are so close that not a particle of earth can be seen. Where the plants are grown in beds or rows on this system the ground is so shaded by the foliage of the plants, that they withstand a drouth much better than when grown in hills.

The usual distance that rows of strawberry plants are set apart depends on the size of the plot in some measure. Far garden culture two or two and a half feet will do very well, but for field culture they should not be less than three to four feet apart. In the garden the plants may be allowed to spread in the rows on each side so as to leave merely a path wide enough to walk in to pick the fruit. In field culture the runners may spread and fill up the entire ground, but as soon as the fruiting season is past a plow should be run through the vines, cutting up the plants in strips from three to four feet wide, leaving rows of the latest growth of plants to restock the land for the next season's fruit.

Old beds of strawberries that have grown into a thick mass of plants should be thinned out with a hoe as soon as the fruit picking season is past, so as to leave the plants standing about a foot apart. If this has been neglected, the sooner it is now done the better, or the growth of next season will be slender, and but little fruit will be produced.

Two years is as long as it is advisable to crop the same plants; and in order to grow this fruit with the best success, means must be taken every season for a supply of new plants. On the row or bed system this is effected by cutting out a large portion of the old vines as soon as the fruit is gone, and allowing the runners from those left to replace those cut out.

It is generally understood, I presume, that strawberry plants are of the two sexes, male and female, or staminate and pistilate. The staminates (males) should always accompany the pistilates, in the ratio of one row of male to three or four of the female plants. Staminates are self fructifiers, and may be grown separate from the pistilates, where it is desirable to do so, but no pistilate, according to the theory now generally acknowledged, can produce its *maximum* of fruit unless it be grown in the close vicinity of a staminate variety.

Where the ground is generally covered with snow during the winter I do not consider it important to cover the vines as a winter protection. I never cover mine, having many large beds, covering about half an acre, and my plants are seldom injured by the frosts. But plants set in the fall are liable to heave out of the ground in the early spring, and it is therefore advisable to plant them early enough to become well rooted, and in the spring to press those into the earth that have been thrown out by the frost.

When plants are covered for a winter protection, something should be first laid down among them to raise the covering an inch or two from the ground, in order to allow the air to circulate under the covering, or the plants will be liable to be smothered. Any coarse litter, such as barnyards afford, is suitable to cover the plants, but always in a manner to afford some air among them.

Clinton, N. Y. T. B. MINER.

Snapping Beetle---Blight on Apple Trees.

West Plattsburgh, N. Y., July 23, 1861.

Eds. Co. Gent.—Inclosed you will find an insect which I found under the bark of one of my apple trees. I was talking with one of my neighbors last night; he is in full faith that the enclosed insect is what has destroyed so many of our trees the past and this season. I wish you to give us your opinion in regard to the matter. The way the tree operates (from some cause, whether in consequence of the sting of this insect, or otherwise) is: The bark will commence and turn black on the body of the tree for 6 or 8 inches in length, and cleave from the wood, and then the sap, or some other substance will run down and destroy the bark to the root. It often occurs on the limbs; it then uses up the limb entirely, and whether its ravages will stop with the limb, is more than I can tell. I had, one year ago, as handsome an orchard as one would wish to see; but this spring there is something that makes a man's heart sick of trying to raise trees in this section. It is not only with my trees, but with all that are in this section. I have laid it to the hard winters and our dry summers for the past two years, but in conversation with this neighbor, as above mentioned, I could not make him believe in that, or that it was the result of anything but the work of this insect.

M. E. O.

The insect accompanying the above is a snapping beetle, one of the numerous species of the genus *Athous* in the family Elateridæ. I have not leisure at present to study out its name. It is quite common to find the beetles of this group under the loose bark of dead trees. Their larvæ are the well known "wire worms," which feed on the roots of plants, and some of them also on the bark and wood of trees, generally trees that are dead. I do not think this snapping beetle has anything to do in causing the malady to which M. E. O. refers. Some of my own apple trees are dead, and others are dying, from the same disease which he so well describes. I at first suspected it might be caused by the soap I was each year applying to the bark to repel the borers from the trees. But further observation satisfies me this is not the case. Several of my soaped trees remain thrifty and perfectly free as yet from this disease. Frequently the first commencement of it is where a limb has been sawed off in trimming the tree. It appears to me to be the same disease which has been so fatal in pear trees, and to which the names "fire blight," "sour sap blight," and "frozen sap blight," have been applied. But, except those which are occasioned by insect, I have not given that attention to the diseases of trees which entitles my opinion to much weight.

ASA FITCH.

IRRIGATION.

The following is Mr. C. Howell's plan to irrigate rocky meadows, &c. He makes a shallow ditch, and runs the stream down on the side of the hill, and then makes small openings along, to let the water flow out by degrees, running down the sides. He stops those openings all up in the fall, to prevent the water from leaching away through the crevices; in this way the rocks are left covered. He has cut heavy grass, (red top, &c.) where three years ago were nothing but rocks, stumps, &c., where those meadows now supply him with hay, so that he has his upland for grain, &c., and it gives a better chance for clover; this is a great advantage. J. T. Howell. *North Chester, N. J.*

ELECTRIC WEATHER INDICATOR.—

This neat and curious instrument foretells the weather from 12 to 24 hours in advance. Sent free by mail on receipt of 50 cents by the manufacturers, LEE & CO., Newark, N. J. Liberal discount to Agents.
Aug. 15—w&m1t.*

IMPROVED SOUTH-DOWN SHEEP.—

I shall offer about 40 head of yearling Rams, breeding Ewes, and ram and ewe lambs at my Eleventh Annual Sale, on Wednesday, October 2d, 1861. Having bred from Mr. Webb's topping rams, the quality of my sheep are surpassed by none.

For particulars and Circular address me at Holmdel, N. J.
Aug. 1—m2t. J. C. TAYLOR.

CHESTER COUNTY PIGS.—

AN EXTRA GOOD LOT

Of Chester Pigs, properly paired, for sale by J. R. PAGE,
July 4—w4tm2t. Sennett, N. Y.

THOS. WOOD continues to ship to any part of the Union, his celebrated PREMIUM CHESTER CO. WHITE HOGS, in pairs not akin, at reasonable terms. Address,
Jan. 10—w&m1y. PENNINGTONVILLE, Chester Co., Pa.

SHORT-HORNS

AND

BERKSHIRE SWINE.

FOR SALE.

A few COWS and HEIFERS, one aged BULL, and three or four BULL CALVES.

A yearling BOAR HOG, several SOWS and PAIRS OF PIGS two months old.

Prices in keeping with the times, and delivered in New-York, on rail car or ship board, free of charge.

Apply to L. G. MORRIS,
Herdsdale Farms, Scarsdale, P. O., Westchester Co., N. Y.
July 4—w&mtf.

FIRST PREMIUM

AWARDED BY THE

N. Y. STATE AGRICULTURAL SOCIETY,

At Elmira, October, 1860,

TO HARDER'S HORSE POWER.

THE subscribers Manufacture, at Cobleskill, N. Y.,

ENDLESS CHAIN HORSE POWERS,

COMBINED THRESHERS AND CLEANERS,

THRESHERS AND SEPARATORS.

These Powers operate with greater ease to the team than others, running with very low elevation, and slow travel of the horses. The Combined Thresher and Cleaner runs very easy, is capacious, separates the grain cleanly from the straw, and cleans as well as a regular fanning mill. In short, THESE MACHINES HAVE NO EQUAL, of which fact we are confident we can satisfy all who will consult their own interest by addressing R. & M. HARDER,
Aug. 1—m2tw2t. Cobleskill, Schoharie Co., N. Y.

STEEL PLOWS

We are now manufacturing a superior **Steel Plow,** intended for general use. Some of the advantages it possesses over the cast iron plow, are lightness of draught, durability, and freedom from clogging or sticking in heavy, clayey sticky or tenacious soils. The parts most exposed to wear are so constructed that they may be readily repaired by any blacksmith.

We would refer to the following persons who have them in use:

John Johnston, Geneva, N. Y.; Wm. Summer, Pomaria, S. C.; R. C. Ellis, Lyons, N. Y.; Col. A. J. Summer, Long Swamp, Florida; A. J. Bowman, Utica, N. Y.; A. Bradley, Mankato, Minnesota; A. L. Fish, Litchfield, N. Y.; Volney Owen, Union, Ill.; John Slighter, French Creek, N. Y.

"Mohawk Valley Clipper," No. 1, full trimmed, all steel,..	$15.00
do. do. with cast point,................	14.00
"Empire," No. 1, with cast point, full trimmed,............	15.00
For Three-Horse Plows,....................	$1.50 extra.
For Adjustable Beams, ...	1.00 do.

We also manufacture Sayre & Klink's Patent Tubular Shank

STEEL CULTIVATOR TEETH.

These Teeth are intended to supersede the old style of wedge teeth and teeth with cast iron heads. They are not liable to become LOOSE in the frame, like the FORMER, nor to BREAK, like the LATTER. They are as readily attached to the frame as any form of tooth.

SAYRES' PATENT HORSE HOE.

This implement is considered to be superior to any other for cultivating Corn, Cotton, Tobacco, Potatoes, Hops, Broom Corn, Nurseries, and all crops planted in rows or drills.

Steel Shovel Blades and Cultivator Points made, and all kinds of Swaging and Plow work done to order.

☞ SEND FOR A CIRCULAR. ☜

REMINGTONS, MARKHAM & CO.,
Ilion, Herkimer Co., N. Y.

E. REMINGTON & SONS,
BENJAMIN P. MARKHAM,
GEO. TUCKERMAN.

March 21—w&mtf.

BRIGHT ON GRAPE CULTURE.—

SECOND EDITION.

THIRTY PAGES OF NEW MATTER,

with the experience of 1860 and '61, being the most important part of the work. Indispensable to all GRAPE GROWERS. Sent by mail, free of postage, on receipt of the price, 50 cents, in stamps. Address
WILLIAM BRIGHT, Box 138 Philadelphia P. O., Pa.
July 4—w&m3m.

THE AUSTIN STRAWBERRY.

This remarkable variety, after three years' trial, has proved to be the

MOST WONDERFUL STRAWBERRY

in cultivation, it has been produced this year—16 of the berries weighing one pound. It is as productive as the WILSON, much larger, and finer flavored; the berry is a beautiful scarlet, and commands the

HIGHEST MARKET PRICE.

It continues long in bearing, and maintains its large size throughout. It was sent to New-York from Watervliet up to the 20th of July—long after all other varieties had disappeared. It is without doubt the most valuable market berry in cultivation; it is much more prolific than the TRIOMPHE DE GAND, larger in size, and altogether more attractive.

The plants of the AUSTIN are now offered at greatly reduced prices —viz.: $1 per dozen; $5 per hundred, and $30 per thousand.

Orders addressed to either
CHAUNCY MILLER, Shaker Trustee, Albany, N. Y.
WM. S. CARPENTER, 468 Pearl-Street, New-York.
Aug. 1—m2t.

MOHAWK RIVER UPLAND FARM FOR SALE.

The farm owned and occupied by the subscriber, situated one and a half miles west of the village of Amsterdam, and containing 138 acres of land, 20 acres being in wood, and the balance under a good state of cultivation. Said farm is beautifully located, and commands a view of the Mohawk River and Valley, Erie Canal, and New-York Central Railroad, that cannot be surpassed. The soil is a gravelly loam, and well adapted to all kinds of grain or grazing; the fences are good, (mostly stone,) and so arranged that stock has free access to water at all times. The orchard and garden contains a large variety of choice grafted fruit, consisting of Apples, Pears, Plums, Cherries, Currants, Gooseberries, Strawberries, Grapes, &c. The buildings are nearly new, the house and principal barn having been built within the last ten years. The house is stone and built expressly for a CONVENIENT, COMFORTABLE FARM HOUSE; the main barn is 64 by 32 feet, with 20 foot posts, and basement 10 feet high; it has other barns and sheds adjoining, sufficient to accommodate a large stock. There is also on the premises a small tenant house, nearly new and in good repair. The above farm will be sold on liberal terms, and possession given the first of April next; or if purchaser desires, can buy stock, farming utensils, &c., and have possession immediately. For further particulars inquire on the premises or by mail, of

JOHN M. VANDEVEER,
June 27—w&mtf. Amsterdam, N. Y.

RARE CHANCE.

The undersigned now offers for sale his

SPLENDID SUBURBAN RESIDENCE & FRUIT FARM,

LOCATED NEAR

Hudson, Columbia Co., N. Y.

This farm, containing 20 acres, together with the buildings, is situated on an eminence commanding a very extensive view of the city, river and surrounding country. Within three-quarters of a mile of all the landings, railroad depots, and business parts of the city,—the grounds are all tastefully laid out and decorated with a great variety of flowering plants, trees, shrubs, vines, and varieties of evergreens, deciduous trees, screens, hedges, &c., &c. The farm is in a high state of cultivation by thorough draining, trenching and manuring. The buildings are all new, handsome, thoroughly built, convenient and ample. The garden and orchard is extensive, containing all the best varieties of apples, pears, cherries, plums, peaches, grapes, and quinces. Also Raspberries, blackberries, strawberries, currants, gooseberries, &c. Nearly 1,000 dwarf pear trees set in soil trenched two feet in depth, and trained pyramidically, are now bearing. The location is eminently adapted to the cultivation of the grape, as a large collection of the best varieties, producing splendid fruit, will testify. The farm is well adapted (as was designed) for raising fruit for the New-York market, and the fine specimens sent to market and on exhibition prove the truth of the assertion. Improvements too numerous to mention in an advertisement, together with the locality, render it one of the cheapest and most desirable places to be found on the Hudson between New-York and Albany. Price $10,000. Terms of payment made easy.

REFERENCES.—John Stanton Gould, Josiah W. Fairfield, Charles P. Waldron, Charles F. King, Captain Steamer Oregon, Hudson, or of the subscriber on the premises. SOLOMON V. GIFFORD.
June 6—w13tm2t.

LANDSCAPE GARDENING AND RURAL

ARCHITECTURE—Landscape, Agricultural and Civil Engineering, Surveying, Leveling and Draughting.

GEO. E. WOODWARD,

Architect, Civil Engineer & Draughtsman,

No. 29 BROADWAY, NEW-YORK.

Country Seats, Parks, Rural Cemeteries, and public and private roads, laid out and superintended. Plans, Elevations and Working Drawings for Buildings in all departments of Rural Architecture, prepared and mailed to any section of the country. Consultations gratuitous, personally or by letter, March 21—w&mtf.

CANADA SHEEP FOR SALE.—

COTSWOLDS, LEICESTERS & LINCOLNSHIRES.

28 ONE YEAR OLD BUCKS, weighing from 240 to 275 pounds each. Price $60 to $100 each.

7 TWO YEAR OLDS and upwards, weighing from 300 to 340 pounds each. Price from $100 to $120 each.

4 IMPORTED FROM ENGLAND.

EWES at moderate prices. JOHN SNELL, Edmonton P. O.,
Aug. 15—w5t.* 24 miles west of Toronto, C. W.

WANTED.—One Hundred Pure BLACK SPANISH FOWLS of this year's raising, say 92 pullets and 8 cocks. Address WM. H. HERRICK, Oswego, N. Y.
Aug. 15—w4t.

THE ILLUSTRATED
1862. ANNUAL 1862.
REGISTER OF RURAL AFFAIRS.

THE EIGHTH NUMBER, for 1862, of THE ILLUSTRATED ANNUAL REGISTER OF RURAL AFFAIRS is now nearly ready for the press. In the attractiveness and value of its contents we do not think it has been surpassed by any preceding number. We submit below a partial abstract of its contents, which will show their variety and the extent to which they are illustrated—the present number of the ANNUAL REGISTER containing more than

One Hundred and Sixty Engravings.

The ANNUAL REGISTER for 1862 will be ready early in September, and we are now prepared to receive orders for single numbers or in quantity, which will be filled as soon as it is issued. The attention of OFFICERS OF AGRICULTURAL SOCIETIES, and others who propose attending Town, County or State Fairs this Fall, is particularly requested to the ready Sale which may be had for the REGISTER during these anniversaries, and on other occasions throughout Autumn and Winter. TERMS—as heretofore: SINGLE COPIES, postpaid, TWENTY-FIVE CENTS; ONE DOZEN COPIES, postpaid, TWO DOLLARS; ONE HUNDRED COPIES, FIFTEEN DOLLARS, and larger quantities at a farther reduction.

TO ADVERTISERS.

TWENTY PAGES only will be devoted, as in the previous issues, to ADVERTISEMENTS. The number being limited, more or less applications have each year arrived too late for admission upon them; last year some of our best friends and advertising customers were thus disappointed, and on this account, as well as in order that the work may be expedited as much as possible, it is desired that all who wish for space should send in their advertisements IMMEDIATELY. Notwithstanding increased circulation, prices remain for 1862 as heretofore:

One Page	$20.00
One-Half Page	12.00
One-Third Page	8.00
Cards, from	$3.00 to 5.00

PARTIAL ABSTRACT OF CONTENTS.

Among other valuable chapters, the ANNUAL REGISTER for 1862 will contain the following:—

I. FARM BUILDINGS—THIRTY ENGRAVINGS and Four Designs.

1. General Considerations.
2. Estimating the Capacity of Barns.
3. Form of Farm Buildings.
4. How to Plan a Barn.
5. Barn Basements.
6. Cost of Barns.
7. Design One—Barn for Fifty Acres or Less.
8. Design Two—Barn for Seventy-Five to a Hundred Acres.
9. Tool Rooms and Details in Stable Construction.
10. Design Three—A Large Three-Story Barn.
11. Design Four—A Small Three-Story Barn.
12. Various Details.

II. VEGETABLE PHYSIOLOGY, or How Plants Grow—SIXTY-ONE ENGRAVINGS.

1. The First Formation of the Embryo.
2. The Seed and the Requirements for its Germination.
3. Process of Germinating in Plants having One and Two Seed Leaves.
4. Mode of Growth and Structure of the Plant or Tree.
5. The Root—Layering; Cuttings; Transplanting.
6. The Stem and Branches.
7. The Buds and Leaves.
8. The Process of Growing.
9. Principles of Grafting and Budding.
10. Flowers—their Organs; the Crossing of Different Varieties.
11. Species and Varieties.

III. THE GRASSES—THIRTEEN ENGRAVINGS.

1. Importance of the Grass Crop.
2. Descriptions of the more Common Species.
3. Nutritive Value of Hay.
4. Management of Grass Land.
5. Suggestions in Hay-Making.

⁂ This article includes plain and concise descriptions of no less than TWENTY-TWO of the different grasses, with the peculiarities of which every farmer should be familiar—eleven of them accompanied by carefully drawn illustrations.

IV. LIGHTNING RODS—THIRTEEN ENGRAVINGS.

1. Essential and Non-Essential Points in their Erection.
2. Materials and Connections.
3. Length, Height and Supports—Stiffeners above the Roof.
4. Entering the Earth.
5. The Copper Rod—Various Errors—Cost of Rods.

V. BALLOON FRAMES—TWENTY-FOUR ENGRAVINGS.

1. Their Merits and Practicability.
2. Method of Raising—the Sills, Studs and Wall-Plate.
3. Directions for One-Story Buildings.
4. Directions for Two or Three Story Buildings.
5. Siding, Lining and Construction of Partitions.
6. Framing Large Barns.

VI. MOVABLE-COMB BEE-HIVES—EIGHT ENGRAVINGS.

1. Advantages of the Movable-Comb Hive.
2. Descriptions of Different Kinds.

VII. THE ORCHARD AND GROUNDS—FOURTEEN ENGRAVINGS.

1. Summer Pears—Old and New Sorts.
2. The Value of Orchards.
3. Training Weeping Trees.
4. Removing Large Trees.

VIII. THE FARM—How FORTUNES ARE SOMETIMES SUNK.

IX. FRUITS AND FRUIT CULTURE—ONE ENGRAVING.

1. Rules for Pruning Grapes.
2. Directions for Transplanting.
3. Root-Grafting the Grape.
4. Depredators and Diseases.
5. Apples for the West.
6. Selection of Hardy Grapes.
7. Young Cherry Trees.
8. High Prices for Pears—The Glout Morceau.
9. Broadcast Cultivation—Apples in Wisconsin.
10. Hardy and Tender Trees—Culture of the Blackberry.

X. THE DAIRY.

1. On Cheese-Making by Beginners.
2. Hiram Mills' Way of Making Butter.
3. Two Valuable Rules in Making Cheese.

XI. DOMESTIC ANIMALS—TWO ENGRAVINGS.

1. The Best Doctor for Animals.
2. Shropshire Down Sheep.
3. Wintering Sheep.
4. Training Cattle to Jump.
5. Registering Sheep—Care of them in Spring.
6. To Prevent Horses Kicking—Teaching them to Canter.
7. Making Cheap Beef—Beginning Winter Right.
8. Regularity in Feeding—Profits of Sheep Raising.
9. Training Draft Animals—Cattle Racks.
10. Swine Fed on Skim Milk—Treatment of Sows with Young Pigs.
11. Relieving Choked Cattle—Weaning Lambs.

XII. RURAL AND DOMESTIC ECONOMY, &c., &c.

XIII. USEFUL TABLES.

1. Value of Food for Domestic Animal.
2. Weight of Grain to the Bushel.
3. To Measure Grain and Corn in the Granary or Crib.
4. Measures of Capacity, Length and Weight.
5. Weights of a Cubic Foot and Bulk of a Ton of Different Substances.
6. Capacity of Soils for Water.
7. Velocity of Water in Tile Drains.
8. Contents of Cisterns.
9. Distances for Planting Trees, &c., and Number to the Acre.
10. Force of Windmills.
11. Quantities of Seed to the Acre.
12. Quality of Different kinds of Wood.
13. Gestation of Animals.
14. Quantity of Garden Seeds Required for a Given Area.

XIV. ADVERTISEMENTS.

This, preceded by the usual Calendar pages and Astronomical Calculations, forms a book which is certainly cheap at its retail price, and the Publishers, with a view of rendering its circulation still wider and larger than that of any previous Number, are prepared, as above intimated, to offer the most liberal Terms for its introduction in quantities, either to Agents, Agricultural Societies, Nurserymen, Dealers in Implements and Seeds, or any others who take an interest in the dissemination of useful reading, and in the promotion of Rural Improvement.

Address all orders or inquiries to the publishers,

LUTHER TUCKER & SON,
August 1, 1861. ALBANY, N. Y

PRINCE & CO., FLUSHING, N. Y., will send new Catalogues of
STRAWBERRIES, BULBS, GRAPES,
and all other Fruits, to applicants with stamps. Aug. 22—w&m1t.

SEEDS AND PLANTS OF NEBRASKA.—Now ready, over 40 kinds of Nebraska Flower Seeds, to all who send stamps for postage and putting up.

Plants, Shrubs and Fruits sent to all who pay for boxing and putting up.

All orders that came too late last season will be filled this fall.

Curious Tree and Shrub Seeds sent gratuitously as above.

R. O. THOMPSON.

Hereafter address me at SYRACUSE, OTOE CO., NEBRASKA TERRITORY, as we now have an office established here. Aug. 22—w2t.

TREES AT LOW PRICES.

ELLWANGER & BARRY

Respectfully invite the attention of the public to their present immense stock, covering upwards of FIVE HUNDRED ACRES OF LAND, and embracing everything desirable in both

Fruit and Ornamental Department,

Grown in the very best manner, and offered either at wholesale or retail, at greatly reduced prices.

Parties who contemplate planting should avail themselves of this opportunity, the like of which may not soon occur again.

Descriptive and Wholesale Catalogues forwarded gratis, and all information as to prices, &c., promptly given on application.

MOUNT HOPE NURSERIES,
Aug. 22—weow3t. Rochester, N. Y.

FARM FOR SALE.—

Two hundred and Eighty acres of good Limestone Land, 4½ miles east of Brownsville, Pa.—two hundred acres cleared and under a high state of cultivation.

Price $50 per acre, 2-5ths of which will be taken in pure bred stock.

Address JOHN S. GOE, Brownsville, Pa.
May 24—wtf. (P. O. Box 6.)

THE CULTIVATOR.

THIRD] TO IMPROVE THE SOIL AND THE MIND. [SERIES.

VOL. IX. ALBANY, N. Y., OCTOBER, 1861. No. 10.

PUBLISHED BY LUTHER TUCKER & SON,
EDITORS AND PROPRIETORS, 395 BROADWAY, ALBANY, N. Y.

J. J. THOMAS, ASSOCIATE EDITOR, UNION SPRINGS, N. Y.

TERMS—FIFTY CENTS A YEAR.—Ten copies of the CULTIVATOR and Ten of the ANNUAL REGISTER OF RURAL AFFAIRS, with one of each free to the Agent, Five Dollars.

Editorial Correspondence.

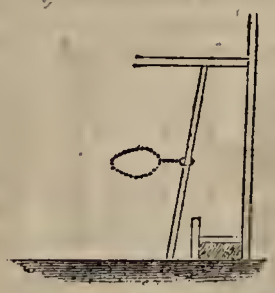
FARMING IN CAYUGA COUNTY---II.

It is hardly necessary to remark that the main object of farming is pecuniary remuneration. The question is asked over and over again, "Does farming pay?" "Can you get the interest of your money?" The answer to this question has been kept in view in giving most of the following brief reports of the management of successful cultivators in this county. It is true they are rather the exception than the rule; but the present object is not to hold up failure, but marked success for imitation. The same mode of management which in these instances has given nearly uniform success for a series of years, would produce similar results in all other case. Indeed it must not be taken for granted that any of these instances indicate the highest degree of profit capable of being attained by farming, for nearly all are observed to contain some obvious defects; but by copying the best points of each, a higher degree of improvement might be attained. "Whatever man has done, man may do," and if one farmer has attained a high degree of perfection in the management of cattle, another in the planning and structure of farm buildings, and a third in the raising of grain, there is no insuperable difficulty in combining all these, or all their essential points for success, in one. One who devotes a lifetime to a pursuit, may certainly perfect himself in at least half a dozen branches of husbandry.

Among the farms visited, the following, mostly of moderate size, are given to show that "farming will pay." Doubtless there are many others in the county equally successful, or more so—these are only a few that accidentally came to my knowledge. A brief statement of some points of their management will be useful to others.

ISAAC N. SEXTON of Venice, occupies 100 acres, which he bought seven years ago at $60 an acre, making the cost of the farm $6,000. He paid $3,000 towards it at the time; during the seven years he has occupied it he has replaced the poor fences with good ones, added to the buildings, and paid the remaining $3,000 within $300. This success is the more observable when it is stated that poor health has prevented much active labor, and he has besides had much sickness in his family. Everything, however, has been vigilantly attended to. He showed me a 13 acre field of grass that by estimate would yield this year at least two and a half tons, and stated that this was the lightest in five successive years, having averaged previously about three tons. His first crop on the land was corn, the land having been well manured the previous autumn—a mode of applying the manure which he regards as far the best, the rich portions being thus ultimately diffused through the soil. The corn was followed by barley, which yielded 44 bushels per acre; and both corn and barley being then about $1 per bushel, they netted $705 for the two years, or $27 per acre each year. The field was seeded to grass after the barley. His fences are mostly of rails, with vertical stakes, coupled by wire or bored caps. All are made of the heart portion of white elm; the stakes being from near the centre of the log, are very durable. He thinks such rails will last 50 years.

PETER HUDSON of the same town, has 140 acres. Being strong and vigorous to labor, he has accomplished much in the twelve years he has occupied the place. He bought 100 acres at first, at 50 dollars per acre, running in debt for the whole—he literally began with nothing, but sturdy hands and good judgment. He has erected a barn costing $1,200, and dug 21 miles of ditch, three feet or upwards in depth; and from the products of the land, has now in 12 years about paid for the 140 acres. He keeps about 20 head of cattle, besides other animals, and by careful saving, and using plenty of litter, makes about 400 two-horse loads of manure yearly. His principal barn is 44 by 68 feet, with a basement under the whole; furnishing wagon house, tool room, and stables for his cattle and horses. The horse stable is remote from the stone walls, and is comparatively free from dampness. All the stables are neatly paved; those for the cattle have a broad gutter behind the animals for the droppings, about five inches deep, the portion next to it on which the cattle stand, being large flagging. They are fastened in the stalls by a chain and snap for each animal, according to the mode frequently adopted, and shown in the annexed cut. They do not dirty their stables, except by occasionally stepping into the manure gutter. All are foddered through openings from above. The manure is wheeled out into the yard, and formed into an even uniform heap, by alternating well the horse and cow manure, and the litter, instead of the too common error of allowing straw to accumulate in one place, and unmixed dung in another. A wagon way passes through the basement, and directly over it is a trap door through which bags of hay or grain

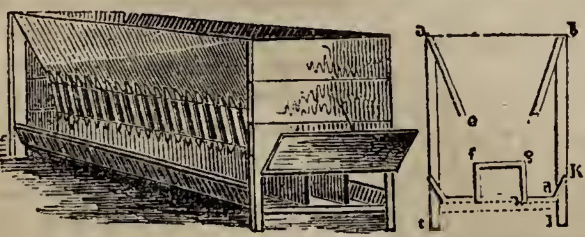


are passed down with little labor from the granary. The work shop is amply provided with tools, vice, &c., both for convenience and economy in making structures and repairing implements. The best tools are kept locked in a chest, and are not allowed to pass into ordinary hands, without the knowledge of the owner. This barn is not large enough, and he intends to add to it, giving it a length of 100 feet.

The rotation observed on this farm is, corn on sod, barley, grass two years old, wheat after summer fallow, grass. More than two tillage crops are not allowed in succession, the owner remarking that three always made the land "sleepy." A small crop of oats is raised only for home use. The barley has averaged 33 bushels per acre; the wheat about 30.

Alvin Freeman of Scipio, cultivates a farm of 244 acres. He has occupied a portion 35 years. He began with only $100, which was the first payment for 40 acres; he has made additions at different times, and the 244 acres are now all paid for, exclusively from the land. This farm affords one of the best specimens of mixed husbandry in the county. It is on the high ridge of land on the west side of Owasco lake, and is about 800 feet higher than the waters of the Cayuga. The seasons are consequently some weeks shorter than along the borders of the latter.

The first object which strikes the eye of the visitor, is the fine range of barn buildings, all substantially built with vertical boarding and battens, and covered with three coats of paint. Spacious and cleanly basements extend under the whole. Cattle are kept in stalls in winter, and are fastened to their places by chains furnished with snaps, similar to those already described. The year that this shelter for his sheep and cattle was completed, he was deficient in hay, and expected to be compelled to buy twenty tons; but so great was the saving affected by protection, that this was not only unnecessary, but five tons were actually saved. His Spanish Merino Sheep yielded at this time an average of 3½ lbs. of wool per head. But they improved so much under the influence of shelter, as to yield next year over four pounds; and in subsequent years the average fleece extended upwards to five and six pounds. Last year he sold 111 ewes for four and a half dollars each, after having sold their fleeces at an average of six pounds at 50 cents a pound, or three dollars each, and retaining their lambs, worth each from one to two dollars more, the ewes being 3 to 5 years old, and some 8 or 9 years. The average profit per head was reckoned about 9 dollars, or nearly one thousand dollars for the whole. He is satisfied that shelter effects a saving of one third of the hay otherwise required; and that there is a gain of one third from the improved condition of the sheep. He has constructed neat racks for feeding sheep, from the cut which he saw in The Cultivator in 1856, p. 201, but has improved it by making the slats vertical, or rather slightly inclining inwards at the top. When they inclined outwards at the top, the animals drew out the hay at the top and wasted it, but now all is saved. These racks are 12 feet long, will feed 12 sheep on each side, or 24 to each, and may be easily lifted or carried. They cost five dollars each.



The present unfavorable season has mostly afforded light crops. In common with other portions of this region, the Mediterranean wheat, which is almost universally raised, was nearly killed by winter, and will not yield over ten to fifteen bushels per acre. This farm has, however, usually given about thirty bushels per acre, but to reach this product the land must be fallowed and manured on the surface after plowing, and before harrowing and sowing. The usual practice is to draw out the long and coarse manure towards the close of winter, or early in spring, and deposit it on the field intended for fallow, in heaps of suitable size to decay properly. After the ground is plowed, and before sowing, these heaps are drawn and scattered as evenly as possible over the land, and after harrowing, the grain is drilled in. The only difficulty is that the ground is apt to become too much beaten about the places of the heaps for the easy working of the drills in those places, but this is obviated by plowing successive portions, and manuring them from the unplowed part. The advantages are important—the owner estimates the average gain in the crop resulting from this treatment at about ten bushels per acre. He does not succeed in raising wheat after oats, and even after barley the crop is several bushels less than from fallow. The spring wheat on this farm (as well as throughout the region) is heavy, and promises 25 bushels per acre. Last year the corn yielded 55 shelled bushels; on a former occasion 80 bushels were obtained, and in one instance 105¼ bushels of oats per acre were obtained from a field. Barley has yielded over a large field 44 bushels. About 25 head of cattle are kept, and 150 sheep; and about 500 loads of manure are made yearly. Foddering cattle is commenced early, or as soon as frost affects the grass—that being regarded as the most critical period in the year, and when cattle fall away most rapidly, or contract fatal diseases.

A young apple orchard of 100 trees was set out three years ago, now in their fourth summer since transplanting, being about three-fourths of an inch in diameter. They now afford an average measurement of three inches and a half. It is scarcely necessary to add that the ground has been well cultivated.

On being asked what departments of farming had proved most profitable and had enabled him to raise enough to pay for this fine farm, he answered, "It is a little of everything that has done it—mixed husbandry. I sell some wool and some sheep; dispose of a portion of my cattle as they increase; raise some corn and wheat, so that if one fails for a single season, I have enough of the other to make up the deficiency. They all help each other." Some attention has been given to draining, but much of the land in this region has a gravelly subsoil, and needs it less than in other places. He repeated the advice given him in early life by a farmer of experience:—"Don't you ever buy any wet land, no matter how cheap you get it, but purchase the most costly you can find that don't need draining." This was before the use of tile, and the advice, with little modification, may apply to ditching—"Don't cultivate any wet land until it has been thoroughly tiled."

As a proof of what energy, judgment and economy may accomplish, A. Freeman mentioned to me the case of a young neighbor, Fayette Van Liew, who five years ago, with only $1,000, bought an 80 acre farm at $65 per acre.

He paid but $500 for the land, being compelled to use the other $500 for team and implements, &c., leaving him $5,000 in debt. He has now, in 5 years, reduced this to $1,800, having paid a yearly average of $640 from the 80 acres.

Two miles from A. Freeman's, a fine farm of 150 acres is occupied by John Aikin, who bought it six years ago for $10,500, paying one-half down. He has since increased his farm stock more than a thousand dollars, and paid $2,000 more, besides the interest, and maintained his family comfortably. He corroborated the views already expressed in relation to raising wheat after summer fallow; last year his crop thus raised was 31 bushels per acre; the previous year, after barley, it was only 26 bushels. The barley was, however, 30 bushels per acre, but both crops had, of course, somewhat reduced the strength of the soil more than a single crop of wheat.

Horace Schenck occupies a good farm of about 150 acres, in the town of Springport. Since completing the payments for it, he has, in favorable seasons, cleared $1,000 in a year.

The successful farming of George H. Chase of Springport, has been already mentioned, who in seven years, with no previous knowledge of farming, has doubled his capital from his land. His success is owing to tile draining, keeping accurate accounts of his success and failures, measuring his crops, weighing his cattle weekly while feeding, seeking the best information from all sources, and reducing it energetically to practice. J. J. T.

◆

HEAVY EXPENSE OF ROUGH ROADS.

Wagons last much longer in those regions of the country which are destitute of stones. Nothing batters a vehicle to pieces more rapidly than striking stones when under full headway. The farmer who is carrying 25 bushels of wheat to market, and whose wagon wheels strike a stone three inches above the common surface, cannot fail to be satisfied that a severe injury has been done to his wagon, harness, and horses, by this single concussion, A repetition many times a day, year in and year out. makes many heavy bills at the blacksmiths, wheelwrights, and harness-makers.

What is the probable cost of a single stone in the highway, for one season? Twenty wagons or more may strike it in a day; that is, it may cause six thousand heavy blows annually against wagons and wagon-tires. The only reason for its remaining there is the "trouble" of casting it out. We have been just led to a train of reflection and calculation on this subject, by finding a hard sand-stone fixed in the centre of the wheel track in the road, the upper angle bearing marks of many thousand wagon blows. The corner was worn away an inch down, and for a breadth of three inches. At least ten thousand blows must have done it. A crowbar, and ten seconds' labor would have ejected it. How then does the account stand? We think about as follows:—

Dr.—To 10,000 hard thumps, estimated damage 5 cents each, $50.00
Cr.—By 10 seconds of labor saved, at $1 per day,.......... .0003

Or one thirty-sixth part of a cent. The gain, therefore, in employing a man once a month to clear out loose and tight stones, would be at about this rate, or more than one hundred thousand fold. If this calculation is not founded on accurate data, will our readers who detect the error, please correct it accordingly, and judge for themselves? We intend it only as an approximation.

There are in the state of New-York about 60,000 miles of public highway. Only a small portion of this amount is free from stone, say 10,000—the remaining 50,000 has more or less scattered along the beaten way. The road law contains an excellent provision in relation to them,—requiring, if we remember correctly, that the loose stones should be thrown out once a month. Half a day's work, annually, for each mile, would probably keep the track entirely clear—the aggregate expense for the whole State being about $25,000 yearly. The aggregate value of buggies and farm wagons in the State is about 60 million dollars. If the roads were kept smooth, about eight per cent. of wear and tear would be saved, or nearly 5 millions—the expenditures, to affect this saving, as we have just stated, being only $25,000—leaving a clear gain of $4,975,000 annually. Even if the saving was only 4 per cent., the clear profit of smoothness would be $4,950,000; or taking a most extreme case, and putting it as low as only 1 per cent, even then the profit would be $575,000.

We hope all our readers who travel stony roads, will look at this subject, make their own estimate, and act accordingly. Now is the season when many loose stones washed out by summer rains, or knocked loose by wagon wheels, should be thrown from the track.

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THE SECKEL PEAR.

In a recent conversation with John Morse of Cayuga Bridge, who has had much experience in raising and marketing pears, he placed the Bartlett first on the list; next the Doyenné Boussock; and third, the Flemish Beauty. He next named the *Seckel*, but remarked that its small size was a serious objection.

The Seckel, however, has some important advantages. It is scarcely ever attacked by fire-blight—it is a great bearer—and it is perhaps the richest in flavor of any pear ever raised. The objection of want of size may be partly obviated by good cultivation. Some years ago a few trees growing in grass gave fruit about the usual size, or a little larger than cherries. The ground was then plowed and kept well cultivated, and the next crop furnished specimens as large as Virgalieus. They had at least tripled in bulk. Last year, from a dwarf tree, standing in a strong, rich, cultivated soil, we had Seckle pears, the largest of which averaged three inches long, and two and a half in diameter, they were nearly as large as good Flemish Beauties, and would not have been recognized as Seckels. The crop this year, on the same tree promises to be nearly as large. We have recently examined two large Seckel trees on the grounds of B. & S. Beatty of Cayuga Co. The roots entered under an ash-house, and additional vigor is imparted by refuse slops. They are loaded with fruit, while other sorts bear little or nothing. The crop, they state, usually furnishes as large pears as Virgalieus. So confident are they that this variety, by proper cultivation, may be made to grow large enough for market, that they have recently set out a young orchard consisting largely of Seckels.

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Fence Posts on Clayey Soils.—We have sometimes seen it stated that setting posts *deep* would prevent their heaving by frost. A writer in the N. E. Farmer, relates that a neighbor built a new fence, and "to prevent the posts from rising, set them full four feet in the ground. In about two years his fence was high enough to admit his calves to pass under it, about the third year his yearlings, and at the present time I am informed his cows can do the same with little inconvenience." A good underdrain beneath the line of fence, is a simple and perfect remedy.

CAYUGA COUNTY FARMING---III.

Cayuga has no princely farms, conducted with distinguished skill and success; but there are many excellent ones conducted on a moderate scale, the proprietors of which give vigilant attention to their management, and make the business interesting as well as profitable. Much may be learned from the experience of such men. The following memoranda of some visits to a few in the southern towns, well skilled in the management of domestic animals, as well as in raising crops, will doubtless furnish some valuable suggestions.

Anson Carter of Ledyard, has about 170 acres. He gives special attention to sheep. His Spanish Merino fleeces have a high reputation—selling last year at 55 cents per pound. They average over 4 pounds each. He feeds his sheep grain through winter, preferring corn. The lambs receive one gill daily, the older sheep half a pint. He begins to feed cautiously, giving very little at first. He provides sheds for all his sheep, which they can occupy in winter at pleasure.

He raises good crops—has had 100 bushels of oats per acre; usually raises 50 bushels of corn, and 30 of wheat. He deems it very essential to sow oats early—prefers to plow the land in autumn—has had heavy products when sown on ground where winter wheat had been killed. He attaches great importance to the practice of manuring wheat in autumn after plowing, and before harrowing and drilling. To prevent as much as possible the team from packing the soil, he plows on one side a portion of land, the width of which is about equal to the distance that one load would extend in unloading, and then drives the load across this plowed strip, scattering it from the wagon. When this plowed portion is thus covered with a thin, evenly spread coat, another strip is plowed, and the same process is repeated. He has practiced draining to a considerable extent, cutting 3 feet deep, and using stones for filling. The crop from the wetter portions of his farm thus drained has reimbursed the entire expense in a single season. He pointed out a very heavy crop of corn on such a piece of drained land, where but little could be obtained before. No weeds line his fences, which are of rails with vertical stakes. They are of oak, and he states that there are now some sound rails known to be 60 years old. A fine osage hedge stands over a tile drain—a portion is 5 years old, and is now a good barrier; another portion, 3 years, will soon be sufficiently so. The dry bottom increases the hardiness of the plants.

Asa Crocker of Genoa, directs his chief attention to sheep. His Spanish Merino fleeces average about five pounds, and sold last year at 48 cents per lb. He feeds them all winter, being careful to begin in autumn before frost has injured the quality of grass. He gives corn and oats—would give a gill of the former and half a pint of the latter, but prefers the mixture, an intermediate quantity being given. He finds it essential to begin very gradually with lambs—if surfeited, they acquire an incurable dislike. They rarely eat at first, but gradually learn. The sheep are grained at noon, and foddered night and morning. He finds draining of great importance. A piece of land so wet that the horses mired, was ditched, and sowed with Flint wheat some years ago, and yielded an average of 34 bushels per acre. Surface manuring was applied after plowing, and the manure mixed with the top soil, and the wheat worked in by the use of a two horse cultivator. The manure was coarse or long.

Moses Lyon of Northville, also attaches much importance to feeding sheep in winter—he gives about one gill of oats daily to lambs, which is equal to one bushel for the whole winter. This bushel causes the growth of at least one additional pound of wool, (worth more than the oats,) while the gain in flesh or carcass is still more valuable. He prefers oats for lambs, and corn and oats mixed for older sheep. He often obtains 80 bushels of oats per acre, and deems good thorough tillage important to the success of this crop, preferring, when practicable, to cross-plow the ground. He finds the grain to be heavier if the crop is sown very early, but not greater in measure.

The expenses of raising a crop of oats, including seed, and harvesting, is about six dollars per acre; fifty bushels at only 25 cents would therefore yield a net profit for the use of the hand, of six and a half dollars—at 40 cents, the nett would be 14 dollars. His rotation is wheat after summer fallow, corn, oats, wheat, and four years of grass, it being deemed essential that the land should be as long in grass as in tillage; and summer fallow is considered as furnishing ten bushels more of wheat per acre than oats stubble. The latter should certainly have a good top-dressing of manure. This rotation would not be applicable to weaker soils.

The three hundred acre faam of the Hull brothers, is one of the finest in the town of Venice, lying mostly in the warm and rich valley of Little Salmon Creek, and being distinguished for its neat fences and excellent tillage. It is finely stocked with excellent animals. A pair of native steers, six years old, are among the largest to be found in the country. They are a fine red color, of handsome, compact and heavy form, and measured five feet eight inches high at the shoulders. The experience of the owners of this farm in feeding grain to cattle accords with that of John Johnston and G. H. Chase, as already given in a former number of these sketches. In one instance, they fed a lot of steers four quarts of meal each a day; a neighbor resolved to accomplish more, and fed 12 quarts. Theirs when sold, proved to be the best, although not equal to the others when feeding commenced. They have over 200 sheep, in which the Spanish Merino blood strongly predominates. The fleeces average 5 lbs., and have sold at 50 cents per lb. As a proof of what might be accomplished by good keeping, they stated that two discarded lambs were given to a neighbor, who raised them as pets. At two years, one of these sheared 8 lbs. 14 oz., and the other 9 lbs. 9 oz., or nearly double the average of the flock, the wool selling with the rest, at 50 cents, or over 4 dollars per head. Two other lambs, similarly raised, sold for twenty dollars.

They practice surface manuring wheat in autumn, and think it gives an increase of ten bushels per acre, under favorable circumstances. They also attach great importance to top-dressing young grass fields in autumn, as a protection to the plants, and assisting an early start and luxuriant growth in spring. They use rails for fences, employing black ash and chestnut, which they draw while the teams would be otherwise idle in winter. Their observation leads to the the opinion, elsewhere expressed, that basswood rails, cut late in summer, will last at least twice as long as winter cut rails.

Henry Pardy, in the same neighborhood, gives his attention chiefly to fat cattle and sheep, and has some 375 acres. One of the heaviest steers in the country is a white seven-eighths Durham, derived from G. Vail's stock, now about six years old. He weighed 2,600 lbs. nineteen months ago, measured around the girth last winter 9 feet 2 inches, and is about 5 feet 8 or 9 inches high. He has not been weighed lately, but is estimated by different persons, at 3,000 to 3,500—his owner thinks he will weigh 3,200. Two other red steers, a perfect match, both crosses of Durham and Devon, weighed together last winter over 4000. They are beautiful and symmetrical animals. They have received moderate feeding, and proper attention at all times.

George M. Sisson of Venice, has a neat and well cultivated farm of 220 acres. Not a weed was seen growing along the fences, and not an elder bush is found on the place. He states that he has had but one poor crop for several years—that was a portion of his barley this year, injured by the insect. Last year his barley was 600 bushels on 16 acres—he has raised 40 per acre. He had last year a field of Mediterranean wheat which averaged 38 bushels per acre. It was sown after spring wheat, oats, and barley—and was manured with 12 loads of manure per acre. He seeds very successfully both with fall and spring crops, applying over a peck per acre of clover seed, and a smaller portion of timothy. He sows and invariably rolls after sowing the spring grain, which usually causes nearly all the seed to vegetate. (Rolling winter wheat at sowing, tends to winter-killing.) Two contiguous fields of winter and spring wheat both presented a dense carpet of young clover in the stubble, but that after the spring wheat was decidedly the best. A very heavy crop of Dutton corn was thought to promise sixty bushels per acre; the hills 3 feet by 3 feet 3 inches. It had been cultivated *six times*.

Among the smaller farms of this region is that of David Wood, who occupies 85 acres. About one-half is table land, and needs drainage; the other half has a natural drainage caused by a gravel subsoil, and slopes handsomely eastward towards the broad rich valley of Salmon Creek, which is here several miles wide and some hundreds of feet in depression; and the extensive views of well cultivated farms extending in a long range of many miles in either direction present a magnificent appearance.

The rotation here practiced is corn, barley, wheat, and grass three years. The proprietor plows deep, and raises heavy crops. He has had 500 shelled bushels of corn on seven acre; and 50 bushels of barley per acre, and 40 of wheat. He manures wheat on the surface in autumn, but in wet seasons and on rich land, it has proved injurious by promoting too great a growth of straw. But few farmers however have land rich enough to produce this result. There were but 8 head of cattle, but most of them, (grade Short-Horns,) would doubtless take first premiums at nearly any county fair. He does not like the practice of stabling cattle, deeming the foul air resulting from confinement more injurious than the benefit derived from warmth, but furnishes them good shelter in sheds. There is no doubt that want of ventilation and pure air has proved detrimental and deterred many farmers from the practice of stabling, which is to be strongly recommended only when pure air, cleanliness, and an abundant supply of litter are secured. I observed no weeds on this farm, and the boundaries could be easily distinguished by the neatness of culture, from adjacent lands.

One of the best farmers of this portion of the county, is J. Searing of Ledyard. He occupies 220 acres, 40 of which is woodland. The surface being undulating, he has only drained the swales or lower portions. Each field is entered by a gate, and is conspicuously numbered on the gate-post. The bottom board of each gate is about 15 or 18 inches from the ground, so as not to be clogged by snow in winter, and they last much longer for this reason, as they are never strained nor twisted on opening and shutting. A groove in the posts admits a wide board to drop in, in case it is desired to close this lower part against small animals. The rotation formerly adopted, was corn on sod, the first year; oats, barley, spring wheat and peas, following the wheat, the second year; wheat, with manure, the third; meadow and pasture the three or four years following. It was found however, that corn following several years of grass, was more or less injured by worms, and wheat is now made to succeed the grass by a summer fallow; then one year of clover; then corn, followed by barley and spring wheat, seeded down by rolling in the seed. Oats is not favorable for seeding; and what is raised, is sown separately. On asking him if his farm netted the interest of its cost, he remarked, "Yes, a good interest; and throwing the woodland out, it pays a *big* interest."

THE FUCHSIA.

This is a beautiful family of plants, very easy of cultivation, and universal favorites. Rapid in growth, graceful in habit, and free in bloom, there is every reason why it should be a favorite. In the British Islands, they withstand the winters, and plants may frequently be seen trained up the sides of a building and reaching to the eaves. The out door cultivation of this plant in this country cannot be very successful, on account of our dry, hot summers, which are very unfavorable to the health of the Fuchsia. Our winters of course are too severe for them. But in green-houses, and in rooms which can be kept at a low temperature, devoid of the dryness inseparable from a stove or furnace-heated atmosphere, the Fuchsia repays the little care necessary for its welfare, with a profusion of its very graceful and beautiful flowers. The number of sorts has been greatly increased within the last few years, particularly of the double varieties. There is much difference in the size but little in the shape of the flowers of the different varieties. The general characteristics of the flower are, four sepals usually white, scarlet, crimson or rose colored, much reflexed, frequently so much so as to touch the tube of the flower with their points; tube long, corolla compact, of purple or violet color usually, sometimes white, rose and crimson.

In a green-house the Fuchsia is very valuable for summer blooming, being almost the only attraction at that season. The manner of propagation is very simple. Cuttings will grow with the utmost readiness in any sandy compost, and when rooted, grow with great rapidity, requiring shifts into larger pots as they increase in size. While growing they require an abundance of water.

Some of the best double varieties are Sir Colin Campbell, Auguste Gevaert, Leopold 1st, Marquis of Bristol, and Cruciata, the latter a remarkable variety with a cross-shaped instead of circular corolla.

Good single sorts are Great Eastern, an immense flower, Senator, and La Crinoline, a variety with very widely expanded Corolla.

G. B. H.

Oneida Cheese Vat.—Wm. Ralph of Holland Patent, Oneida Co., N. Y., has invented a cheese vat, which has been in use for a year past, and is said to have proved a very valuable aid in cheese-making.

DWARF APPLES.

It is possible that the dwarf apple may become more popular than the dwarf pear. It is not liable to the accidents of the latter. All sorts of apples grow freely on the dwarf stock, and it is not necessary to take that particular care in selection, founded on many years of experience—although some sorts of the apple form handsomer and better shaped heads when treated as dwarfs than others. The symmetrical growers should be selected, because they make the process of pruning simpler, and more easily give the desired shape.

Common standard apple trees occupy too much room for gardens and small places. At the commonly recommended distance, 33 feet, only 40 can stand on an acre; and placed at the nearest distance admissible, 25 feet, an acre is required for 69 trees. A quarter-acre village garden can therefore have only 10 trees at the former, and 17 at the latter named distance, if apple trees occupy the whole ground. But dwarf apples may stand about four times nearer, giving sixteen times as many trees on the quarter acre. If therefore one-half the quarter acre garden is occupied with dwarf apples, 85 trees may be planted at 8 feet apart, a suitable distance for the Doucain dwarf; or 150 at 6 feet apart, the space for the smaller or Paradise dwarf.

The best varieties for dwarf stocks, as a general rule, are those which naturally form a round or oval head. Such will need but little pruning. Among these are the Red Astrachan, Jersey Sweet, Porter, Baldwin, Dyer, Monmouth Pippin, Summer Rose, Benoni, and Sweet Bough. There are others that incline to grow upright, and need some pruning to prevent their running upwards, and to induce spreading; among these are the Northern Spy, Twenty Ounce, Lady Apple, Wagoner, Early Strawberry, and Bailey Sweet, all of which make handsome dwarfs. There are again others, although not so handsome growers, yet the ornamental appearance of the fruit render them desirable dwarfs, as the Fameuse, Red Canada, Carolina Red June, Munson Sweet, &c. There are still others which grow so irregular that some care would be required to make handsome trees of them, such as Fall pippin, Canada Reinette, and Tompkins County King. Dwarf apples should be mostly confined to summer and autumn varieties, in order to furnish a fresh supply for the table of the most desirable sorts. Winter apples may be most profitably raised in orchards of large trees, or purchased in market by the barrel.

Dwarfs are especially desirable for those who plant new places, and consequently desire an early return. The Paradise stock will give crops the third year; and the Doucain the fourth, in abundance. A fine young collection of dwarfs, now four years planted, and growing their fifth summer, bear much better this unfavorable season, than old orchards. Some of the trees are loaded. A Hawthornden is so full that the branches densely set with apples, lie on the ground with their loads of fruit, now the second year of such profuse bearing. The Doucain trees are about 7 feet high, and the Paradise 5 to 6 feet. The soil is fertile, and always well cultivated.

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☞ Among Purchasers from this side the Atlantic, at the **Webb South-Down Sale**, we have now to add the name of **Fred. Wm. Stone**, Esq., of Moreton Lodge, C. W., who was the buyer of two yearling rams, No. 176 at 13 guineas, and No. 195 at 22 guineas. They arrived safely a fortnight or more ago.

[For the Country Gentleman and Cultivator.]

Farming in Canada—Sparred Floors—Root Culture, &c.

Messrs. Editors—As you are getting opinions from all parts, and from almost every corner of the continent, I venture to approach you with my thoughts. Having noticed several articles in the Country Gentleman on sparred floors, and being somewhat interested in stock raising I carefully read them all through. Having had some little experience among stock of all descriptions, I claim to have a trifle of knowledge about the comfort of animals. I am not going to lay down a practical rule for any one to follow, for I wish every one to follow his own mode of practice, and it is reasonable for every one to think his own way the best.

Respecting sparred floors for this cold climate, I, for one, cannot see that they will ever be of any practical benefit. I am well persuaded that stock of all kinds need warmth and comfort to thrive well, and sparred floors must have a continual draft up from below, which must make them rather on the cold side. I know, as far as experience teaches me, that milch cows should not be on sparred floors, neither should any breeding stock of any description, (they may do for feeding bullocks and hogs;) but for any other kind of stock nothing can beat a warm, close, comfortable stable with plenty of ventilation and a good dry bed to lay on. I have tried and seen a good many different ways—had both cold stables and warm ones, and am well convinced that a great deal less food is consumed in a moderately warm stable than in a cold one. Having the entire management of an establishment of about 70 head of cattle, and upwards of 200 head of sheep —120 breeding ewes—all in comfortable stone sheds and stables, and, at the present time, over 70 young lambs and 11 young calves, I don't wish to exchange for sparred floors, for I think I should have to record a good many deaths, to leave frozen ears out of the question. Some might say that we ought not to have the young stock come in so early, but it behoves every breeder of stock who wishes to gain a reputation to have his young stock come in early. If well attended to, they get a much better start, and will always keep ahead of younger ones. For young calves or young lambs we must have a moderate degree of warmth when first dropped at this cold and inclement season of the year, or they will be sure to prove a loss. Hence a good bed is necessary.

My opinion is that every farmer should keep as much stock as he can furnish feed for, and grow as much feed as will feed it well without selling any, but not overstock. I don't think it wisdom to keep more stock than can be fed well. If fed well they will pay well, and leave a good return in manure.

Our general rule is to grow about 50 acres of wheat, 40 acres of oats, 40 of peas and barley, 40 of ruta bagas, and mow 170 acres of grass. We have scarcely ever had plenty of straw for litter, but made out with buying a few loads through winter at $4 per ton, being the market price, which I consider not all loss, for it adds to the manure heap after serving a good purpose for bedding. We have always had plenty of dung for our root crop, but last year we put on 4 tons of ground bones, which we find a very good article, so much so that we have purchased and have ready for another season, 20 tons, at $20 per ton, and I intend increasing the root crop near 60 acres between rape and turnips. I might say that we intend top-dressing about 50 acres of meadow with ground bones instead of plaster; of the latter we have always used about ten tons.

After our root crop, spring wheat follows, (the Ohio club,) and we get excellent crops, and then seed down to grass, and are always sure of a good plant of clover, for the ground is in fine mellow condition, and gives about 2 tons of hay per acre the summer following.

These views and modes of practice may not agree with a good many, but you have them for what they are worth.

They no doubt will cause some cross arguments; but I wish to be distinctly understood that however well sparred floors may do in a warm, humid climate, I think they will never do for the more northern parts.

JOSEPH KIRBY,
Moreton Lodge, C. W., March, 1861. Manager to F. W. Stone.

[For the Country Gentleman and Cultivator.]

AN IMPORTANT CAUTION.

Where a grain field has been infested with the aphis, no animal should be pastured upon the stubble of that field for three weeks after the harvest.

The lady bugs, or lady birds, which gather in the grain fields to feed on the aphis, give out an acrid yellow juice from the joints of their bodies and legs on being handled or otherwise disturbed. This effectually protects these useful insects from being devoured by birds or by other carnivorous insects. And I can readily believe this may render these insects poisonous to any animal eating a number of them. Immediately after the grain is harvested I find those lady bugs so numerous on the stubble, and with their pupæ hanging suspended from the leaves and stems of every weed growing among it, that it will be impossible for an animal to gather a mouthful of the herbage there without taking in some of them.

Last Monday morning my neighbor, Alex. L. McNeil of East Greenwich, turned his hogs into his oat field, the third day after it was cleared of the grain. The best hog in the herd became enormously swollen and died about noon, and others of them appearing to be stupid and unwell, they were immediately removed to other pasturage. I hear it also reported that some eight miles from here a span of horses turned into an oat field both died, swollen in the same manner.

If any cases analogous to these now mentioned have occurred elsewhere, I earnestly solicit persons having knowledge of them to drop me a line at least, informing me thereof, that we may have it authentically determined whether my suspicions are correct, that animals are liable to be poisoned by eating these lady bugs.

Salem, N. Y., August. 26, 1861. ASA FITCH.

[For the Country Gentleman and Cultivator.]

Carrots for Horses---Cure for Colic.

In the Country Gentleman of Aug. 8th, there is an article from "Old Hurricane," upon Root Crops, which winds up with some disparaging remarks in reference to the value of carrots as feed for horses. As I have a great affection for horses, I must have my say when it seems as if any one intended to lessen their enjoyments.

"Old Hurricane" seems to have forgotten that old adage, "Variety is the spice of life;" for the article in question leads me at least to believe that carrots constituted the sole food of "Friend Nathan's colt." I confess, however, that I have never fed carrots to a *one*-year colt, but have fed carrots to colts and horses from two to twenty years old, and have always found them of inestimable value when given with other food. I have never given but one kind of food to a horse for more than one or two weeks in succession; and as far as my experience goes, think it impossible to keep a horse in good condition without changing his food from time to time, and keeping his bowels free by carrots or bran mashes.

The chief value of carrots seems to me to be, their slightly laxative properties and their magical effect upon the skin and hair, together with their fattening properties; moreover, their judicious use oftentimes prevents the administration of those terrible concoctions called "horse medicine," which the ignorant owner of a horse is often prevailed upon to give for the slightest disease.

Writing about "horse medicine," reminds me of a dose which I heard a man say he gave to a horse for colic. The infernal dose consisted of one pint of whiskey, one paper chewing tobacco, one handful of black pepper, and a gill of lamp oil. Strange to say, the horse recovered, but as the owner remarked, seemed "rather shaky" for a few days. And now if any of the readers of your admirable paper, have a horse attacked with the colic, let them give him a quart of warm flax-seed tea, with one or two tablespoonfuls of carraway seeds in it, and see if the remedy has not a good effect; but let them not forget to warm the extremities by hand and flannel rubbing, endeavoring to remove that deadly chill which so often accompanies those sudden attacks. If they have to employ a veterinary surgeon, let them stand over him with Dr. Dadd in one hand and Youatt in the other, unless they feel sure that the title of veterinary surgeon was honestly gotten, not picked up.

But I am forgetting all about carrots. In keeping horses in that half condition so necessary for work either upon the road or farm, carrots are with me indispensable, and I would as soon think of keeping horses all winter without carrots or bran, as I would of keeping them on either hay or grain alone. In summer, a little grass now and then can take their place. It is my aim to bring horses out in the spring in good condition, not needing (if they ever do,) bleeding, or a dose of physic. With this end in view, I have always fed from two to six quarts of washed and sliced carrots at noon, and in nine cases out of ten have accomplished my end. G.

Westchester Co., N. Y.

A GOOD SMOKEHOUSE.

We lately observed a well-planned smokehouse on the premises of a good farmer, worthy of a brief description. It was about six feet square, the lower half built of brick, furnished with an iron-lined door, and serving as an ash-house, and place for the fire. The upper part, about four feet high besides the ascent of the roof, was made of wood. It was separated from the lower part by scantling joists, a space of two or three inches between them, through which smoke and air could freely pass, but sufficient to catch any ham that might accidentally fall, and thus save it from the fire. The upper part, as well as the lower, was entered by a door from the outside; this upper door may be kept locked, except when admitting or withdrawing hams; but the lower may be left unlocked, for the hired man to build fires, without any danger of the contents above being stolen, as the thief cannot pass through the openings between the joists.

[For the Country Gentleman and Cultivator.]

CONSTRUCTION OF ICE HOUSES.

Messrs. Editors—In answer to a notice in your paper of Aug. 22, 1861, respecting the best mode of building an ice house, I would say that I have seen various plans for building, but prefer a wooden house, above ground, made double, with 12 inches between timbers, and filled with pulverized charcoal or the cinders from the rail road engines, as the best filling. As a non-conductor it is not surpassed, and is also a great protector to the building.

For the covering on the ice, use white wood shavings made by the planing mills if possible, or straw. Pine shavings will injure the flavor of the ice.

Stamford, Ct., Aug. 23d, 1861. JOHN B. KNAPP, Ice Dealer.

☞ We learn that R. M. Hoe, Esq., of West Farms, Westchester Co., has lately imported some fine Jersey Cattle, including one cow, one bull and four heifers in calf.

[For the Cultivator and Country Gentleman.]

Agricultural Notes in Monroe Co., N. Y.--No. 1.

A Mixed Husbandry the True System of Management.

> "One cow and a pig, and a lamb and a calf,
> And plenty of corn, good husbandry hath."

The grand secret of success in growing good crops of grain, and of keeping a farm good, and of restoring an impoverished soil to its original fertility, lies in keeping improved breeds of all kinds of stock, and in making a good supply of barn-yard manure, and applying it to the soil; and I have observed as a general rule, that where a farmer has been thoroughly awakened to the importance of rearing stock of improved breeds, and where he really *appreciates* the advantages for improving the fertility of the soil by feeding out coarse grain to his stock, one is pretty certain to find good crops, a good system of farm-management, and the soil in a good state of fertility. I have never known the rule to fail, where a farmer has occupied a farm, with the foregoing views, for any considerable length of time.

Hearing that Messrs. Benj. Fellows and brother, near Clifton, had a fine herd of Durhams, Mr. Isaac Bower kindly offered to accompany me to their farm, and to favor me with an introduction; and at the same time we would have an opportunity to see some other good farms, and stock also.

Messrs. Fellows' Farm.—Mr. B. Fellows and his brother own about six hundred acres; and a large proportion of it is tillable land, and under an excellent state of cultivation, with a few minor exceptions, where his well-laid plans have not as yet been fully completed. The farm is laid out in very large square fields, and as a general thing substantially fenced, in many places with neat stone fences. There is quite a variety of soil, even in a single field in many instances; and is well adapted not only to grazing, but to raising wheat, barley, oats, and Indian corn. The surface is rather undulating for the most part, and there are but few places where it needs more than a single drain through the lowest places, to render it sufficiently dry for any kind of grain, or for clover. His pastures, crops of all kinds, and meadows, showed very conclusively that the soil is kept good by a good system of husbandry, and that there has been no little attention paid to renovating every field, as often as it is a little impoverished by an exhausting crop.

Their *Stock* consists of about one hundred and twenty neat cattle, several yoke of oxen, cows and calves, and a very nice Durham bull. For the most part, they are grade Durhams—some calves, yearlings, two, three, and four-year olds—and some natives which he has purchased, which affords one a very good opportunity to decide upon the comparative merits of grade Durhams and natives, when in the same pasture.

I spent about two weeks during the past season in New-York city, and saw a great many excellent animals in the yards at Bull's Head, where most of the fat bullocks that are taken to the city are offered for sale; and I have to confess that I never saw a time while there, when I could go into three or four yards and select fifteen or so that would equal in good points, and handling and weight, fifteen three and four years old steers which I could select in Mr. Fellows' herd; and I very much doubt whether one could find fifteen, of their age, in one herd in any other part of this State, that will weigh as much as they will. I think, with safety, they will average by next December nineteen hundred pounds each. Such bunches of fat as are laid up for future use, is a rare sight; and for the most part, they are as beautiful of form and symmetry as a fawn, or a picture without a fault.

Messrs. Fellows do not aim to produce calves of extra size and of superior fatness, as is the aim of many farmers, and then allow them to fall away before winter; but they aim to keep them improving from one season of the year to another, and from year to year. Every good farmer will acknowledge that this is the correct system of management with stock of all kinds. His calves were very thrifty to appearance, and fat enough, but when compared with the calves of some farmers who usually fail to produce any kind of stock but *fat calves* while they are allowed to suck, Messrs. Fellows' calves might be considered quite thin in flesh. I have always observed that when a calf is kept so well while sucking the dam, or while being fed, that it loses flesh after having been weaned, it will not or does not make as good an animal when a year old as if it had been fed less in the outset and kept constantly improving.

Messrs. Fellows practice breeding in-and-in to a limited extent among their neat cattle. Cows are allowed to be served by their own sire. He thinks this connection produces rather superior stock.

The first thought when we see such fine cattle is, what has it cost to raise them, how much grain have they consumed, &c.? These best steers were fed twice a day, about two quarts of meal at one feeding, making about four quarts of meal per day. He feeds a vast amount of cut cornstalks and cut hay and straw, with which meal has been mingled. He has never experimented in feeding steamed food to his stock.

Sheep.—Messrs. Fellows, as I have already mentioned, keep a large flock of sheep, beside their neat cattle; but I saw none in the same fields with the cattle. Their sheep are of the Spanish Merino breed, and those that I saw were very fine in appearance, and of large size for that kind of breed, and produced a very choice quality of wool. They had their present clip on hand when I was there, and I think it would be difficult to find six hundred fleeces that were raised on one farm that will weigh more, and at the same time present as neat an appearance, and be as long and as fine as these. They had a flock of bucks which I think every good judge would set down as very nice animals. They keep also a good lot of good swine, as also do most farmers in their vicinity, which leaves no deficiency in their complete system of mixed husbandry in the line of stock.

Kinds of Grain Raised.—They raise a large crop of peas annually, many of which they feed unthrashed, with the vines, to their sheep in winter. They consider them most excellent feed for all kinds of sheep during the foddering season; and they feed peas, unthrashed, and good hay each once a day. If my notes are correct, they raised about twenty-five acres of peas last season, and about fifteen the present season. I think I was told that they have most of them ground into meal when mingled with coarse grain.

They raised a large field of winter barley, and when they cut it several different reapers were brought to the field to be tested *by themselves*, (which is the true way to purchase a reaper and mower,) and after a fair trial they selected Ball & Co.'s Ohio Mower and Reaper. The stubble where each machine worked was pointed out to us, and the work performed by the Ohio reaper, was far superior to any of that of any other, judging from the appearance of the stubble. A few swaths were cut with each machine, and I could see exactly where some machine had done nice work, while adjoining the narrow strip the stubble seemed as if the work had been badly done. That which was cut best I was told was cut with Ball's Reaper, having sickel-edged knives, which, for cutting grain, are thought to be by many farmers far superior to knives having a razor edge.

They were cutting their oats with this reaper, and it worked very well in those very heavy oats, very much laid, and which, I think, would yield not less than seventy-five bushels per acre. Mr. B. Fellows estimated the number of bushels at eighty per acre. The straw was not large and overgrown, with light panicles of grain; but the large kernels showed that the soil was kept in good tilth by a good supply of some kind of fertilizers.

Messrs. Fellows feed out all the coarse grain which is grown on their own farms, besides purchasing several hundred of bushels, during some seasons, which is ground and fed to their stock.

Sowed Indian Corn.—Messrs. Fellows usually sow several acres of Indian corn. They have now about fifteen acres, a part of which was sowed broad cast, but the greater part of it was drilled in, about thirty inches apart, and at the rate of about two bushels per acre. They had been through it several times with cultivators, and it was large and fine. We went about three rods into it, and we could scarcely see a man half a rod distant. When feed fails in the pasture, they feed their neat cattle these stalks, which they eat quite clean; and they produce fine cattle. Before frost comes, they cut the stalks with corn cutters, and lay them in small gavels; and after they are wilted a little, they are bound in bundles and set up in stooks, and the tops neatly bound, so that they will shed rain well, and are left in the field until they are wanted for fodder. By this treatment they cure well, and none of them become mouldy, and they all save as well as it is practicable to save stalks without an unusual amount of sheds or barn room.

Plowing under Clover.—Mr. B. Fellows accompanied us across one of their sixty-five-acre fields, which was being prepared for winter wheat, which appeared to be in fine tilth. They had plowed under a heavy burden of clover (*Trifolium pratense*,) and were now crossing it with their gang plows, which run about four inches deep. He thinks that *their* soil will produce quite as many bushels per acre, and perhaps more, by simply plowing a few inches deep with gang plows, as it would to cross it as deep as it was plowed, when broken up in the former part of the season. They are accustomed to plow under a coat of clover, about every third or fourth season, as soon as it has attained its full size, and is in full bloom. They raise the small or early red clover.

They stock the land down often, and do not allow their feed to be gnawed clear into the soil, which is one of the true principles of keeping a farm in a good state of fertility; and every field receives a good coat of manure or clover, as often as is practicable, in order to compensate, in part, for the grain or other crops that have been removed from it. They usually sow about four quarts of timothy seed per acre, in Sept., after winter wheat or winter barley, and from six to eight pounds of clover seed in the spring; and this amount produces a sod very soon, and I should judge by the complete mat of grass which this amount of seed has produced in their fields, that half that quantity of seed would be equally as good, as not one half of it can possibly grow. It was a rare thing, that a very small spot of ground could be seen, the seed had catched so well, and had grown so luxuriantly and evenly. So much for good tillage.

I have only space to speak of their very neat barn, one hundred and thirteen feet long, and thirty-six feet wide, painted white, the outside covering being matched, and green blinds at the windows, and a spacious basement beneath it, divided into cattle stables and sheds, and in one end of it a Farmer's Workshop—one of the most important appendages to farm buildings which we can mention—and the very convenient arrangement for obtaining water at the barns for all kinds of stock, both in summer and winter.

A half inch lead pipe conducts the water from an unfailing spring on a hill, some 40 or 50 rods distant; and in one corner of their spacious horse stable, there is, at all times, a reservoir of fresh water, where horses can drink, and water can be obtained for wetting cut straw; and, in the yard below, there is always a good supply for cattle at both barns.

I cannot forbear to speak of the scarcity of noxious weeds, not only among crops of grain, but in the pasture fields. I think I saw a very few Canada thistles in one of the pasture fields, while on many farms in that locality, Canada thistles appeared to bear undisputed sway over every thing that attempted to grow in the same fields.

There was one arrangement, which, according to my own notion, did not come quite up to true standard of a *mixed husbandry*. Tom Tusser has said:

> "Good husband without, it is needful there be;
> Good housewife within, is as needful as he."

I could not exactly understand, why these gentlemen should persist in loving their mother better than any of the numerous throng of eligible young ladies, who are capable of supporting the vacant place in their system of management, so that it may be said no part is wanting. It is, indeed, beautiful to see dutiful sons obeying the injunction of Holy Writ, to forget not their mother in her declining years, but to see the strong tendrils of connubial affection entwining those who have "forsaken" their kind parents, is a sight which tells of enjoyments, which he who lives alone can never appreciate. No insinuations, however, to the Junior Editor of the Co. Gentleman.

S. EDWARDS TODD.

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BOTTLING FRUIT.

A correspondent of the Prairie Farmer gives the following directions. There is too much sugar—one third or one-fourth is enough. In using the hands on the hot cement, have a basin of cold water at hand, into which they should be dipped previously, to cool the surface and to prevent sticking; and if any cement should accidentally adhere, a burn may be prevented by instantly plunging them into the water. This mode, in its essential particulars, is not new, but some of our readers, who practice bottling fruit, may derive some useful hints from it. We have found Yeomans' bottles best, which have a mouth about two inches diameter, and a funnel with a correspondingly wide tube must be provided:—

I use half a pound of sugar to a pound of fruit.

Cement.—One pound of rosin, one large table spoonful of linseed oil, pulverised plaster of Paris enough to make it sufficiently thick to spread on easily with a knife. It can be made smooth when quite hot, with the hands, as the plaster of Paris is a non-conductor of heat.

Manner of Putting up the Fruit.—While your fruit is cooking, heat your bottles by placing them in the oven in a baking pan upon a woolen cloth, (in the pan,) leave the door of your oven open, and let the bottles heat gradually, occasionally turning them. Have ready cotton cloths, large enough to tie over the tops—cover with the cement a space on the cloth, as large as the top of the bottle. Have at hand little pieces of white paper cut round, just large enough to cover the tops of your bottles. When your fruit comes to a full boil, pour by tunnel into your bottles. Now be spry. Take two of the round bits of paper, (dipped in alcohol just as you are ready,) and place them first on the mouth of the bottle. Then your cloths prepared by a handy assistant as directed; tie them on firmly, and cut all off close to the string, then cover all *entirely* with the cement, so as to exclude the air. Now, as hot as you can bear it, press all close and smooth with your open fingers. All this must be done as quickly as possible, as your success depends on keeping everything hot. Keep the cement vessel on the stove when not using. This sign will follow when cold, giving *assurance* that your work is well done; the mouth of your bottle will be *concave*. If it remained quite level, do the work over again, or you will lose your fruit.

I have not lost one bottle thus put up and thus preserved.

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[For the Country Gentleman and Cultivator.]

To Save Cabbages.

Tie two together by the heels, and hang them over a low pole in the cellar, so that the heads will just clear the ground; tuck loose straw around them, and sprinkle twice during the winter with brine. That's the way I keep mine, and always have them as fresh and crisp in April, as when first taken from the ground. Mrs. E. D. Kendall.

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The Country Gentleman.—

"The best of all the American newpapers dedicated to matters of Rural Economy."—*Scottish Farmer and Horticulturist, Edinburgh, Aug.* 7, 1861.

"For years we have received, and perused with indescribable interest, the beautifully illustrated Agricultural Periodicals of the United States, such as the Albany Cultivator or Country Gentleman."—*London Literary Gazette*, 1859.

"The leading Agricultural Journal there."—*London Mark Lane Express, June*, 1861.

[For the Country Gentleman and Cultivator.]

WHEAT CULTURE IN NEW HAMPSHIRE.

Patent Office Wheats—Different Varieties—Growing of Winter Wheat in New Hampshire—Time of Sowing—Smut, Rust, Midge, Chess, &c.

MESSRS. EDITORS—In the Co. Gent. of July 25th, page 65, two of your correspondents have some remarks respecting wheats recently distributed from the Patent Office. They give them a bad character—such as being foul with seeds of weeds, musty, and worm eaten—all of which may be true: but, "first and last," I have experimented with many varieties of wheat from the Patent Office, none of which have had foul seeds among them, nor been musty, or "eaten up with weevil." However, it is several years since I received the different kinds I have been cultivating. The packages were properly labeled with the name of the variety, where from, and whether for autumn or spring sowing. In some instances there have been two or more varieties in the same package. Several kinds proved too tender for our winter and spring climate, while many others have proved hardy and every other way valuable varieties, at least for cultivating in this region of "granite and ice."

After eight or nine years culture of winter wheat, and without a single failure, I have come to the conclusion that winter wheat can be as successfully and profitably grown in the Granite State, as in any other—in the Union or out of it. The present season I have grown a number of varieties, and will here give a sketch of them, and to show that I do not "over-state," I forward you a sample of each in the straw, and also an ounce or two of the different varieties of cleaned grain, in glass phials, properly labeled. Perhaps the farmers in the great wheat growing region of the west, may grow longer headed, and larger kernels of winter wheat, than the samples I forward, but I feel confident that no one can exhibit brighter, cleaner strawed wheat (some 12 or more varieties), than the samples accompanying this. How the kernels will compare in size, &c., with those of western New York, I am unable to say. The samples I forward in the bottles, were not selected "kernel by kernel," but are simply a fair average of the several kinds as they come from the winnowing mill.

We had no rain from the first week in June till into July, and the drouth I presume somewhat affected the growth of straw and heads, as neither are as long as the same kinds were last year. The heads I forward are rather more than an average length of the several varieties, and you will see there is a great difference in the size and length of heads of the different sorts, and of course there is in the yield or productiveness. The varieties of wheat are numerous, and consequently there is a great difference in the quantity and quality of flour from different sorts, as also in the hardiness, tendency to lodge, length and size of straw and head, time of maturing, liability to rust, smut, and to be injured by the midge, fly, birds, and other casualities which the wheat plant "is heir to." The above facts make it important that wheat growers should experiment with different varieties, and ascertain the most valuable sorts for them to grow upon their soil, and in their particular location—sown in drills, by way of experimenting with different varieties, it is not a very expensive affair. A few drills of each kind fifty feet in length, would suffice to test the worth of the several kinds the farmer might wish to experiment with, and by so doing, he might be greatly benefitted.

Of the samples I forward, No. 1 is Gen. Harmon's "*Improved White Flint.*" Some 20 years ago the General sent a quantity of the above-named wheat to the Patent Office, a small sample of which I received, and sowed it two years in succession; but at that time I knew nothing about the culture of winter wheat, and sowed it too late in the season—it was mostly destroyed by the midge. I saved what little the midge left—perhaps half a gill—which was put in a package and marked, and remained in my seed-box till six years ago, when I received several packages from the Patent Office. These, with the White Flint, were sown—the Flint yielding the best. From that small beginning I have every year since raised fair crops of it, and sold many bushels for seed. I think it is the handsomest sample of the lot. This season it has not been injured by rust or midge. Last week, had some of it threshed; it weighed 64 lbs. per bushel, and yielded 48 lbs. of extra quality of flour per bushel. About the same time—(by way of ascertaining the worth of my wheat for family use,)—I purchased at one of our stores 24 lbs. of flour, for which I paid $1, or at the rate of $9 per barrel, it being the best kind of flour sold here—but not of as good quality as that from my wheat, four bushels of which will make a barrel of flour, which at $9 per barrel, makes the wheat worth (to me, for family use,) at least $2.25 per bushel.

No. 2—*Early Noe Wheat* from France. Nothing of the kind can exceed the quality or brightness of the straw of the Early Noe—good heads and kernels, productive and hardy, and its flour makes a number one quality of bread—sweet and moist. The Patent Office Report, 1854, says, "from its hardy and productive nature, it is gradually superceding the Saumer wheat in the high latitude of Paris, and is much sought after on account of its precocity. As this wheat has the property of ripening some days before the common sorts, if it succeeds in our climate in this respect, a great point is gained. A single week thus gained in ripening, would often secure a crop from injury by the fly or rust—aside from the advantages to be gained from an early market." With me, it has not proved much earlier than the Flint and several other varieties under similar culture.

No. 3.—*Michigan Tuscan Wheat.* This variety came from the Patent Office three years ago, highly recommended, in a printed circular, by a number of Michigan farmers. The Tuscan is a good sized berry, productive and hardy. Being a white wheat, it makes a good quality of flour; but there was a slight mixture of six or eight other varieties with the Tuscan, from which I have selected and grown several varieties in drills the present season.

No. 4.—*Early Japan*—probably the earliest variety grown in this country. The sample I forward was harvested 12th of July. The original seed from Japan, by Commodore Perry. I have cultivated it for six years, and have had "bad luck" with it every year, but the fault was not in the wheat. First year, sown too late—2d year, squirrels carried off most of it—3rd, sown on poor sandy soil—next year sown on an alluvial soil; a few days after it was sown, a heavy rain caused a freshet, that overflowed the land, washing off the largest portion of the seed, so that at harvest I obtained only six pounds of wheat. Next year sowed on newly inverted sod, and thinking to make the most of it, sowed it very thinly, in consequence of which the grass grew thick and rank, overtopping and smothering the wheat, so that the yield was not large. This was sown 1st of Sept., 1860, a portion of which was smothered by the great quantity of snow last winter. However what survived, did first-rate, till the seeds came into the milky stage, when it was attacked by whole coveys of yellow birds, they taking a large portion of it. I verily believe the yellow birds have injured me more within the past four years, than all the crows, black-birds and cut-worms that have visited my farm the past twenty years. It is not yet threshed; there may be, perhaps, a bushel of wheat. But, by way of compensation for these trials, I have the satisfaction of knowing that the midge has never injured it, nor has the straw ever rusted, nor the grain smutted, nor has a single kernel of it changed to *chess.* This last remark will apply equally well to the Early Noe. [N. B.—Those who believe in the transmutation of wheat into chess, had better provide themselves with one or both of the above named varieties, as they have never been guilty of such a foolish *sport.*]

The Japan is a red wheat, very beautiful, but rather small berries, the heads different from any other variety I have ever seen. Probably it will not succeed as a winter wheat in the middle and western states. It requires the more genial climate of the southern states, or the covering of snow of our New Hampshire winters—which theory I will attempt to illustrate.

A farmer in Ohio, who in 1855, and again in 1856, experimented with several varieties of Patent Office wheat, wrote to Mr. Klippart, Sec'y of the Board of Agriculture, Ohio, as follows:*

> "There was one variety (from Japan), with a very red chaff, short chaff, short head and straw, that blossoms some ten days earlier than any other kind I have grown, but it has been mostly winter killed. If it were hardy and productive (and it may prove so farther south), it would be an invaluable variety for cultivation in those sections of the country where the midge prevails—from its earliness it would escape its ravages."

Mr. Klippart, in a note says, "The Isothermal line of Japan is about the same as that of Tennessee," from which it is inferred, that it would not be safe to cultivate this variety much north of that State; but it does succeed in New Hampshire. About a year ago I forwarded some five or six varieties of winter wheat to Col. Boyd, Hancock, Md. In a letter of 7th of April, he addressed to me, he says the early Japan has been unable to stand the severity of the winter, having been almost entirely frozen out, from which fact, he supposes it one of our varieties of spring wheat. It has proved a valuable spring wheat in some sections of Maryland.

Mr. Klippart, in the Report, 1857, says:

> "If the farmer deems it advisable to change the varieties of wheat he has been cultivating, the new varieties should be imported from the *north.* The reason of this is very manifest; the north being colder, requires a longer period of time to mature and ripen grain than it does here (in Ohio), consequently the new variety when grown here will arrive at maturity and ripen earlier than in the north; whereas, in the south a greater degree of warmth obtains and wheat ripens earlier than here, consequently when southern wheats are introduced here, they seldom succeed—or are continued by the cultivator, but most generally after one or two trials, are abandoned. For this reason, many of the wheats introduced from Europe, through the Patent Office, do not succeed in Ohio—they are generally found to be too tender for our winters, and more liable to winter-killing, rather than any other malady."

A few weeks since I received a letter from Suel Foster, Esq., Muscatine, Iowa, in which he says "we sow but little winter wheat in this country, it is so apt to winter-kill."

Last fall, 13th of September, I sowed some of the *Early Connor* wheat—raised the previous year, (near Richmond,) on the "sacred soil of Old Virginia," and also some of the *Early May* from Kentucky—scarcely a single plant of either winter-killed, and the grain is much superior to the seed sown. Now for the 8 or 9 years I have grown winter wheat, I have suffered very little from *freezing out*, which seems to prove that both hardy and tender varieties of wheat are less liable to winter-kill here than in Maryland, Ohio, and Iowa. Further on I shall have something more to say respecting the "Connor and May" wheats.

No. 5.—*White Blue Stem.* Coming to apply "the sober second thought," I must say the Blue Stem wheat is a little ahead of the White Flint in personal appearance. The heads of the Blue Stem are rather short, but remarkably well filled. A few days before the grain ripens, a portion of the stem below the heads assumes a purplish or bluish color, giving it somewhat the appearance of rust. This is an old and well known variety.

No. 6—*Early Conner Wheat.* Grown near Richmond, Va. Harvested June 2d, 1859. The seed was forwarded to me by Mr. Harris of the Genesee Farmer. I kept a small quantity of the original, which I forward you for comparison. You will see that the sample I raised is far superior to that grown in Virginia. This and the *Early May* I think are identical—at least there was no perceptible difference in them while growing, both ripening at the same time, about a week later than the Japan. It was planted in two drills of 50 feet each, and I do not think there were fifty heads in the lot but were mutilated by the birds—every kernel in some, being destroyed, as was the case with the Early May. I had seed of this variety for only about 20 feet single drills, and there was not a perfect head in the lot when harvested—so I send none in straw.

No. 7.—*Early May*—sent to me by Mr. Killgore of Fernleaf, Ky. This and the Connor, are a week or so earlier than most of the other varieties. By comparing the two kinds in the phials you will see there is a very close resemblance, and perhaps a shade better than the early Japan.

No. 8 is, as far as the heads are concerned, a curious variety, somewhat resembling the Bald Velvet. The berry is very large, but of rather dingy color.

All of the foregoing, with the exception of the Japan, are white bald wheats.

No. 9. A large, red chaff, bald, dark berry, rather late—probably a productive sort.

No. 10. A very large, heavy strawed, red chaff, appears to yield well, but the latest maturing sort in the lot—somewhat injured by rust and midge, being the only kind thus affected. This fact shows the importance of growing early varieties where the midge and rust prevail.

No. 11.—*White Bearded Velvet*—large, long heads, good sized kernels, and apparently quite productive; not injured by the birds, and probably not so liable to injury from midge as are the bald varieties.

No. 12. Long, large headed, stout strawed, black bearded and chaff, and probably a very productive variety. This, like the Velvet, was not injured by midge or bird.

No. 13. A very short strawed, white bearded sort—long grains, and yields well considering the length of the heads, and is quite as early as the Connor or Early May.

I am unable to decide upon the best varieties to cultivate, from one year's trial, and from not having seed enough to institute a comparative trial by weight of seed and actual measure of land. There is not a bad sample of straw or grain in the lot. But this might be different in other seasons.

Time of Sowing.

In this latitude experience has proved that wheat sown from 20th of August to 5th of September is much less likely to be injured by midge, rust and winter kill, than if sown a few weeks later.

Smutty Wheat.

"As a man soweth, so shall he reap," and if the farmer sows smutty wheat, (without washing, &c.,) he will be very likely to reap smutty wheat, as many of our farmers have found to be the case this year. Smut in wheat is not occasioned by a bug as one of the correspondents of the Co. Gent. asserted two or three years ago, nor by the soil or season. In proof of the above, J. M. H., whose farm adjoins mine, sowed two varieties of winter wheat side by side, a dead furrow separating the two sorts—one, he calls the Lougee wheat, was badly smutted. The Early Noe had no smut in it. Can't a bug cross a dead furrow? This bug theory is all fudge. Soil and season were precisely alike, yet one kind was smutty, the other not. The true explanation of the phenomena is this—the seed of the Lougee wheat was smutty, and the Early Noe was not. Again—last fall J. S. and Dr. E., sowed winter wheat side by side; J.'s wheat was very smutty, and the Dr. had none in his. A few days ago I called in where a machine propelled by water power had just been threshing some "awful smutty wheat." The concern looked very like a lamp black factory. Now if I had carried my purest wheat to the machine, and had it threshed after the smutty stuff, the whole, if 20 bushels, would have been *inoculated* with the sporules or smut seeds of the smutty grains of wheat—and this seed sown without washing, liming, &c., would have produced smutty wheat another season. The safest way, if the farmer has pure wheat, is to thrash it by the flail as far as wanted for seed. These stationary and itinerant threshing machines are badly mixing up our various grains, disseminating smut and chess, and other vile stuff, broadcast all over the country.

Rust.

Good culture and early sowing are the best safeguards against rust. Twelve out of the thirteen varieties escaped rust, while No. 10, the latest of the lot, was somewhat rusted, and the kernels a little shrunk, this variety being a week later than any other. All the sorts were harvested between the 12th and 30th of July.

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* Ohio Ag. Report, 1857, page 700.

The Midge,

Again this season, is very abundant in many fields of spring sown wheat, while all early sown winter wheat has escaped its ravages. Early sown and early maturing varieties of winter wheat, have never been injured to any great extent in this section of country. The reason of this is obvious—our New-Hampshire midge does not *hatch* out till the early sown winter wheats have got too far advanced for the midge to injure them; and all the winter wheats grown here, at least as far as my observation extends, are of the white varieties. Mr. Klippart, in the report already named, says—"There is no doubt that the cultivation of Mediterranean wheat would be at once abandoned in Ohio, were there a variety of white wheat which would successfully resist the various diseases caused by fly, midge, rust, &c., and which would withstand the cold and drouth as well. From the above, I infer the midge comes earlier in Ohio than here, and so in Canada. A correspondent of the August number Genesee Farmer, who dates from Woodstock, C. W., July 16th, says—"What little winter wheat the frost left in this neighborhood, the midge has taken possession of to an extent never before known. The heads are actually red with them, and there does not seem to be room for the fly to deposit their eggs, nor sufficient nourishment in a head to mature the larvæ therein."

I do not understand why the midge should come too late to much injure our winter wheat, and come just at the right time to ruin it in Canada and other places. This Canadian farmer says, "the spring wheat will be too late to give the midge sustenance." On the farm adjoining mine, the winter wheat was not injured by the midge; but the spring wheat, sown after 20th of May, is, in the opinion of its owner, injured by it to the extent of 50, or more, per cent.

Chess

Is becoming a troublesome pest among much of the winter wheat grown here. One of our farmers had a load or two threshed a few days since by a machine propelled by water. The grain, as threshed, is winnowed and passes through a spout into a large box in the basement, and there is a *blower* which forces a strong current of air through the grain as it leaves the spout, blowing chaff, &c. This current of air blew out six bushels of chess, and there was what was called 22 bushels of wheat—probably as much as four bushels more of the chess went in with the wheat; if so, the account would stand thus, 18 bushels of wheat, 10 bushels of chess—or as they call it in Ohio, *cheat*. Some will say the wheat turned to chess; but I will give it as my humble opinion, that all the chess in that lot of wheat, was the direct product of chess seeds sown with the wheat, and there was seed enough left in and about the machine to completely vitiate the hundred bushels of pure wheat threshed. "Smut and chess" are oftener distributed through the agency of threshing machines, than many farmers seem to be aware of. In view of the above, I have what little seed wheat I sow threshed by the flail, and by so doing, avoid smut and chess in my crops. LEVI BARTLETT. *Warner, Aug.* 15, 1861.

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[For the Country Gentleman and Cultivator.]

TREES IN THE WRONG PLACE.

In the first number of the editorial letters upon the Agriculture of Chester County—a series replete with interest—the following sentence may be found: "It has been an article in the creed of most Chester farmers, that no trees are wanted in the fields themselves." That article is eminently sound. Whatever heresies may be maintained in the remainder of their creed—and we are not prepared to assert that there are any—this doctrine, at least, commands our cordial assent. Adhere to that Messrs. Chester farmers, even though you abandon your stone barns and shallow plowing. What is true in the "Great Valley" is equally true the country over; north or south, east or west, let the notion become a fixed principle of action, that *no trees are wanted in the fields.*

There are few objects of which unqualified, abstract excellence is predicable. *When* and *where* are indispensable limitations. In its appropriate place a thing may be very desirable, which elsewhere would be very unwelcome. Thus it is with shade trees, than which there are few natural objects more useful and beautiful when appropriately placed, and few more pernicious when in the wrong spot.

The farmer is, of necessity, essentially a utilitarian. Much as he may with propriety consult the principles of taste in planning and improving his house, and ornamental grounds adjacent, his paramount material interests demand that, in his fields, he should consult profits. While he need not purposely destroy a beautiful object merely because it is beautiful, he must prefer productiveness to elegance.

Shade trees in our fields occupy a great deal of ground, prevent the growth of crops, obstruct the passage of the plow, and rob the soil of its strength. Their advantages by no means compensate for their damage. True, when the field is used as a pasture, horned cattle enjoy the shade. But other stock manifest little or no fondness for shade, and, taking a term of years together, a given field is used as a pasture but a small portion of the period. Assuming a reasonable rotation for grain-growing districts, viz.: 1. Hoed crops manured in the hill. 2. Oats, peas or spring wheat. 3. Wheat with surface dressing of well-rotted manure, and seeded down with clover and timothy. 4. Meadow. 5. Pasture, and then turn over for corn again, to be manured in the hill as before; it will be observed that the shade is a damage four years out of five, and the remaining year, unless the pasture is used for horned cattle, the trees are no real benefit. Along the highway and beside springs, trees are well placed; but if one dots the surface of your field, no matter how symmetrical, "cut it down; why cumbereth it the ground?"

We have thus far assumed that the trees scattered over our fields, impeding cultivation and dwarfing crops, possess the merit of ornaments. Such, however, is not generally the case. Usually the trees have been suffered to stand because good for nothing, and are ugly, gnarled, crabbed, misshapen specimens, which add to their other faults that of homeliness. Possibly it was lest such should be the character of the trees, that the Divine prohibition was pronounced in the sixteenth of Deuteronomy: "*Thou shalt not plant thee a grove of any trees near unto the altar of the Lord thy God.*" For the stunted, crooked trees in many a farmer's fields are a disgrace to any situation, sacred or profane.

Let me not bê understood as opposed to the cultivation of shade trees in their proper place. The plain box of a farm house, unsheltered by a leaf of foliage, exposed to the full fierceness of a summer's sun, excites my unmitigated disgust. None more profoundly appreciates the splendor of the primitive forest, none more truly admires the beauty of the grove. The homestead wherein this paragraph is written, is shaded, surrounded, nearly hidden from the road, by multitudinous shade trees which my grandsire planted, and from the humble dwarf horse-chestnut, now in full bloom, up to the princely Norway spruce, that towers in majestic strength far above larches and buckeyes, tamaracks and locusts, "fruitful trees and all cedars." I prize and cherish them all. I have seen four generations sit beneath their branches, and there shall they stand, types in their annual changes of the life of man, rehearsing, like the flowers of the field, year by year their lesson of warning and of cheer—

> "Each fading calyx a memento mori,
> Yet fount of hope."

HAMPDEN

CAYUGA COUNTY FARMING---IV.

Additional Experiments in Draining.

James Fitch of Springport, has for some years past given special attention to draining. He showed me a field of barley, about six acres of which was drained two years ago, and a crop of corn preceded the barley. The drained part was formerly quite unproductive; now it is decidedly the best. On asking him the amount of benefit he had derived, he answered promptly, "I have received my pay already, in the increase of these two crops." Another field of 12 acres, most of which was so wet that for nine years it did not produce enough to pay seed and tillage, was drained three years ago, the ditches being placed 7 paces or 21 feet apart. Two main pipes, each five inches in diameter, receive all the smaller ones. During a wet time, these both run spouting full of water; and after the heaviest and longest rain, they cease running in about two days. The cost, besides his own labor and that of his horses, was about $200. The first year, this field was planted with corn; it was plowed nine inches deep, probably twice as deep as ever before, the object being to make soil rather than raise corn. The crop was consequently moderate or rather poor. Last year, it yielded a very heavy crop of barley, which was not measured, and after the barley, Mediterranean wheat was sown. The past winter, as is well known, was very destructive to this crop, and the present yield is only about 20 bushels per acre, except one acre of Tennessee May, which was not injured, and which yielded about 30 bushels. [Common winters, there might be very little difference in the productiveness of these two sorts of wheat. J. Fitch thinks the Tennessee but little or no better than the Mediterranean in quality.] This field is now handsomely seeded to clover, and the two crops are regarded as having more than paid the expense of draining. This farm (156 acres,) pays the interest in nett profit, on $100 per acre. "But some say that the interest cannot be raised from the land?" "Then they don't understand farming," was the prompt answer. A large portion of these ditches were cut by means of Pratt's ditching machine, the land being clear of stone. Four horses were attached to it, two on each side, and from 70 to 120 rods of ditch two feet deep were cut daily, the bottom needing dressing and evening afterwards. But the owner would not recommend this ditcher; the cheapest mode of digging, he remarked, is to use a ditching plow, to obviate the use of the pick, and shovel out the loose earth by hand. The subsoil on this farm being clayey and stratified, he prefers not to go more than two feet three inches deep. On such soil water stood in one instance, 24 hours over a ditch dug five feet deep. This would, however, be the case on but few soils.

Calvin Tracy of Scipio, stated a very successful experiment in draining about 40 acres, being a wet portion of his farm, where formerly nothing could be raised, and nearly the only value of the land was the early pasture which the coarse or sedge grass furnished to his cattle early in the season, before such grass became so tough and harsh that they would not touch it. He commenced draining it in spring, and as soon as a portion was completed, sowed or planted with spring crops. The last 12 acres was finished too late for anything but buckwheat. These 12 acres yielded 300 bushels, or at the rate of 25 bushels per acre. The draining was not parallel, but through the wetest parts, and the crop of these 12 acres paid the whole expense.

James Beatty & Sons of Ledyard, commenced draining about ten years ago, and have continued to cut ditches every year since. The amount thus expended is not one-half the original cost of the farm, yet in that time the crops have *more than doubled in the aggregate*. They have no poor crops now. Their Mediterranean wheat the present very unfavorable year, has yielded about 25 bushels per acre, while many of their neighbors who have neglected draining, have obtained only 5 to 10 bushels. They are now enabled to adopt a regular rotation of crops, which serves constantly to enrich and improve their land, and to eradicate the weeds which had formerly obtained strong possession. Their fields successively lie in meadow two years; in pasture the third; the fourth, corn is planted on the sod, the manure having been applied the previous autumn, and the sod plowed just before planting. Corn is followed the fifth year by barley, which is seeded to clover by rolling. This clover is pastured with sheep, the pasture thus obtained being equal to the expense of seeding until the following summer, when it is converted to summer fallow for wheat. The droppings of the sheep, and the crop of clover, furnish an excellent preparation for this grain, which is harvested the sixth year. It is followed by a growth of timothy and clover, which constitutes meadow two years and pasture one year, as already mentioned.

So well satisfied were the owners of this farm at an early day of the advantages of draining, that they have remarked that they should not have been able to finish paying for their farm had they not borrowed additional money to accomplish its drainage.

[For the Country Gentleman and Cultivator.]

VALUE OF OX-MUZZLES.

Very few farmers, comparatively, appear to know anything of the value of muzzles for working oxen. But those farmers who have used them, are very unwilling to abandon the use of them, except when performing certain kinds of work.

Muzzles for oxen are made of wire woven firmly together in the form of a large punch-bowl, sufficiently large to receive the nose of an ox. They are put on the nose, when a small strap is passed over the head, and brought to the other side of the muzzle and buckled.

The advantages of them are, oxen will be far more obedient when muzzled than when they are not, especially when they are at work where they can snatch now and then a bite of any thing to eat. In the meadow, for instance, when getting a load of hay, if oxen are not so full that they cannot swallow another mouthful, they will be constantly on the go, which makes it very unpleasant for both the driver and for the man who may be loading. When plowing among young trees, oxen are very liable to dash into them and tear them down, when they are not muzzled. These ideas will suggest to those who drive oxen, under what other circumstances muzzles will be found very useful, without mentioning them here.

I have always been accustomed to put them on my horses when we were at work among young trees, as most horses delight to nip off the tops of young trees as they pass them.

Ox-muzzles may be obtained at most hard-ware stores. I sent to New-York city for a pair, which cost 20 cents.

I was invited to see an ox, while visiting in Connecticut, which had stepped on his own tongue, and cut off about two inches of the end of it. He attempted to reach a lock of hay as he was passing it, and the driver struck him at that instant, and as his tongue was about to lick up the hay he put his foot on it. It bled but little; and although he took no food for two days afterwards, he was beyond danger. A muzzle would have prevented such an accident. S. Edwards Todd.

[For the Country Gentleman and Cultivator.]

HINTS ON DOMESTIC COOKERY.

Editors Country Gentleman—Having no disposition to preach a doctrine I don't practice, or in any manner invite to extravagance when strict economy ought to be the universal rule, I beg to present for the consideration of housekeepers, the process of making up a few plain dishes, the excellence of which I have tested by long experience—the first of these being

Buckwheat Pone.

I once astonished the landlady of a Boston hotel, by my inquiry why she never had buckwheat cakes for breakfast: "Buckwheat cakes!" she exclaimed in amazement—"Why, I dind't know that buckwheat was good for any thing but *feeding hogs!*" Now those who believe that buckwheat is only good for griddle cakes, have something yet to learn of its value, though not quite so much as my Boston landlady. It makes a capital pudding, and with the addition of pumpkin, a loaf or "pone" unequalled.

Stew ripe, sweet, fine grained pumpkin, until thoroughly cooked; then mash and force through a coarse cloth or fine hair sieve, thereby freeing it from every vestige of a lump. Take two-thirds buckwheat flour and one-third pumpkin, mix with warm milk, salt and yeast, as for wheat bread, until the batter is as stiff as can be conveniently stirred with a strong iron spoon. Grease the inside of an iron basin, skillet, or or what is better, an old fashioned Dutch bake kettle; fill it half full of the batter and set it to rise. When light place it on the hearth—if you have a fire place, with coals underneath and on the cover—if you use a stove, have the oven moderately hot, and bake three hours. The pone, with good sweet butter, is excellent either warm or cold.

Succotash.

Succotash, made Indian fashion, is a capital dish either in summer time, winter time, or any other time, all the year round; but in order to have it in perfection out of the season of green corn and beans, it is necessary to have these constituents as naturally green as possible; and as during a five years trial with all the patent self-sealing cans invented, I always failed of bringing out my green corn and beans for winter use in a satisfactory condition, I resorted to sun, salt and common earthen jars, and am quite satisfied as to results.

Cut the green corn from the cob, taking it before it has the least *glaze;* shell an equal quantity of Caseknife, Mohawk or Horticultural beans, when full size, but not hard; scald both together for five minutes, expose to the sun one day, and then pack down in jar or keg—first a half inch of coarse salt, then an inch of corn and beans, and so on alternately, covering at last with salt, and putting on a board and weight to keep the mass compact. For winter use, soak the mess to be cooked twelve hours, changing the water twice, and boil two hours with sweet salt pork, (not bacon or other *smoked* meat.) Season with pepper, add a lump of butter, and serve hot.

"A Two-Story."

That's the name I learned it by years ago, when at sea with my husband, and although so far as I know, I it is a nautical dish, having had for its inventor some ingenious jack-tar, it is nevertheless palatable enough on shore when properly cooked, which tempts me to present it to the public, salt-water cognomen and all, never having learned or invented any other.

Peal and cut in thin slices, potatoes and onions in the proportion of five potatoes to one onion. Cut sweet, fat pork into thin slices also; take as much fresh meat, either beef, veal or mutton, as you have pork, cut it into ounce pieces, and finally roll out dough slightly shortened, as for pie crust. Place in the bottom of a pot or stew-pan, slices of the pork, until it is quite covered. Then put in a layer of fresh meat, potatoes and onions, dust with pepper and cover nicely with a crust. Begin again with a layer of pork, then the other materials, and cover with crust as before, thus continuing until you have constructed a *five or six story* if you like; then pour in just water enough to cover it, and cook two hours without allowing it to come to a boil.

Canteloupe Pickles.

Take canteloupes just when they begin to turn yellow, but while the flesh is still solid; pare, cut up in slices half an inch thick; dip a moment in hot water, and then pack in jars with spice and cloves, and cover with good pickling vinegar. In a week you will have as delicate and fine flavored a pickle as ever was made. Mrs. E. D. Kendall.

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FALL AND SPRING TRANS PLANTING

Is it best to transplant fruit trees in fall or spring? Do you think it a good way to bury trees in the ground to keep till spring, before setting them out? M.

The rule must vary somewhat with circumstances. Tender trees, as the peach and apricot, are generally best if set in spring, unless in a warm dry soil, in a sheltered place, and in a climate not severe. If the aspect is windy, all trees would be better if set in spring. It may be added, that soils rather wet, or liable to become soaked with water before freezing, should never receive trees in autumn. The rule should be carried one step further;—such soils should never be set with trees at all. They are unfit until well drained. Much of the "bad luck" that occurs, is from wet subsoils, with dry surface.

Hardy trees do well for autumn transplanting if the soil has a dry bottom, and if the place is moderately sheltered from the winds. Apple trees may however be shielded from moderate winds, by banking up around the stem, which serves to stiffen them, and also to protect the roots—the mounds to be shovelled down again in the spring. Such mounds also serve to protect against mice, as these animals will never ascend a bank of fresh smooth earth under snow.

As a general rule, all hardy trees are best set in autumn, if soil, aspect, and climate are favorable. They get an earlier start in spring.

It is commonly best to dig up trees in the autumn from nursersies in any case, whether for fall or spring setting. If sent long distances, they will be on hand and may be set out early. They may be heeled in, and be more effectually secured from the effects of freezing, than if standing in the nursery rows. The roots and most of the stems and branches may be covered with mellow earth. A smooth mound about them, will effectually protect them from mice. It is absolutely essential that all the interstices among the roots be well filled—settling the fine earth, if need be, by pouring in water. If cavities are left, the frost may destroy them. *This is the reason that some persons have been unsuccessful, in keeping trees through winter.*

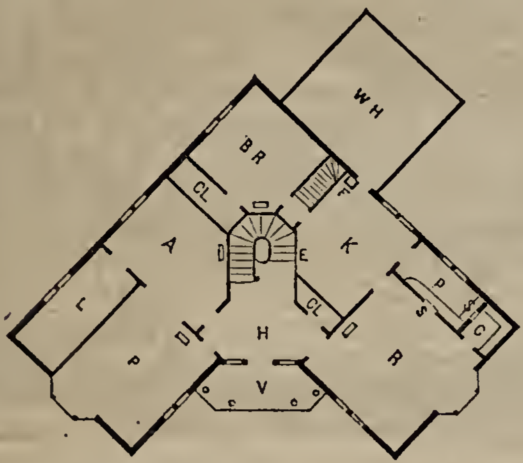
With the precautions above mentioned, it is however a matter of small consequence at which season trees are put out, provided the work is well done. It is *at least a hundred times more important to give them good mellow cultivation afterwards.* Here is where so many fail. Some dig little circles about their trees, which is scarcely better. The whole surface must be cultivated. It is for this reason that trees often do best set in spring,—because in one case the soil settles, hardens, and crusts through winter, but is left mellow after spring setting. This difference could not exist if the mellowing of the soil were were properly attended to.

[For the Country Gentleman and Cultivator.]

DESIGN FOR A HOUSE.

Editors Co. Gent.—If the accompanying drawings as a plan of a residence, which I have sketched at my leisure, are of sufficient value to warrant their introduction into the pages of your paper, I shall take pleasure in placing them at your disposal.

To meet the full requirements which were had in view, in this arrangement, a site should be selected having a southern or eastern exposure if in the country, and the building set with both full fronts to the street, so that the veranda or front door will have a direct front aspect. If however the location be in city or village, it would be desirable to procure a lot having two fronts, if possible looking easterly and southerly, and place the building with a front to each road, the front door looking toward the angle of the street.



A. Drawing-room, 17 by 12.
B. Dining-room, 12 by 15.
P. Parlor, 15 by 15.
K. Kitchen, 14 by 12.
L. Library, 15 by 7.
B R. Bed-room, 12 by 12.
H. Entrance hall, 18 by 7.
V. Veranda.
CL. Closets.
C. China-closets.
S, S. Crockery slides frôm pantry.
E. Door, under stairs, from front hall to kitchen.
F. Chimney.
W H. Wood-house.
The small parallograms are registers from furnace.

In the plan submitted, we flatter ourselves that some improvements have been reached, when we take into consideration convenience, space, accessibility, the ease with which the hot air passages from the furnace can be arranged for so many rooms, all within a few feet of the body of the furnace; and each door within a few steps of the main stair-case. J. C. House, D. D. S. *Lowville, N. Y.*

We have given only the principal floor, the second story being quite similar, closets occupying the spaces over the library and pantry, and a fine balcony over the veranda, reached through glass doors. This plan, it will be perceived, has some distinct advantages, as above mentioned, derived from the peculiar form by which the centre of the house is at once reached on entering the front door.

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[For the Country Gentleman and Cultivator.]

Notes on Morris County (N. J.) Farming.

With your permission I will give you first a few ideas on the cultivation of wheat. We generally take off our oats, then give the field a good coat of manure, and plow sometimes. If the manure is fine we spread before sowing. By plowing as soon as the oats are harvested, the oats come up, and upon a light cross-plowing are turned under again; some plow in, but harrowing does better. We sow two bushels per acre, and seed down with timothy and clover in the spring. Some sow timothy in the fall, but it chokes out the wheat.

I think the above the surest way to improve land, as it generally brings good wheat and good grass.

We generally lime for corn in the fall, ön the sod, or in the spring; some, however, lime after plowing, and an experiment has been made of liming after the corn was four inches high, with good effects. We plant the small eight-rowed corn, finding from experience that it is the most reliable. There has been a large quantity planted this year. Lime is much used in these parts, and with good effects. We spread from 20 to 40 bushels per acre, and Mr. J. Uhler informs me that the farmers of Easton, Pa., spread 100 bushels per acre every five or six years. Our idea is to spread every corn crop, that is once in three or four years.

We generally rotate as follows: 1st. Plow up sod for corn, and lime and manure if we can. 2d year, sow with oats and spring wheat, and seed down for 3d year. Or, plow up oat stubble for winter wheat, and seed in spring.

Our farmers say that where good oats will grow, spring wheat will grow. Barley is not much cultivated. Buckwheat is quite extensively grown: it, as well as rye, succeeds best on new ground in a wet season. Lime helps it much. Speaking of lime, farmers tell me that lime keeps winter grain green longer than without it. I think it is so. We sow three pecks of buckwheat per acre, and two bushels of oats. The farmers of Morris are waking up, and lime is much used, and the manure more carefully looked to; the out-buildings and houses all show improvement, and the replacement of post and rail fences for the zigzag worm fence, looks far better.

In the New-York Observer some time ago, I noticed a paragraph from a New-England paper, in regard to old rails out of post fences. He recommends nailing the old rails upon flattened posts, which would answer; but I find the best way is to take new posts and hole them, and pick out your best old rails and put them in your new fence. If good rails, you will find them last a great while. The old posts are good for firewood, but on a pinch would make a temporary fence by staking over them and putting a rider on. Board fence will answer, but a heavy post and rail fence is the most substantial, and will last, if well set, from 20 to 25 years. Jas. T. Howell.

North Chester, Morris, Co., N. J.

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MAKING PICKLES.

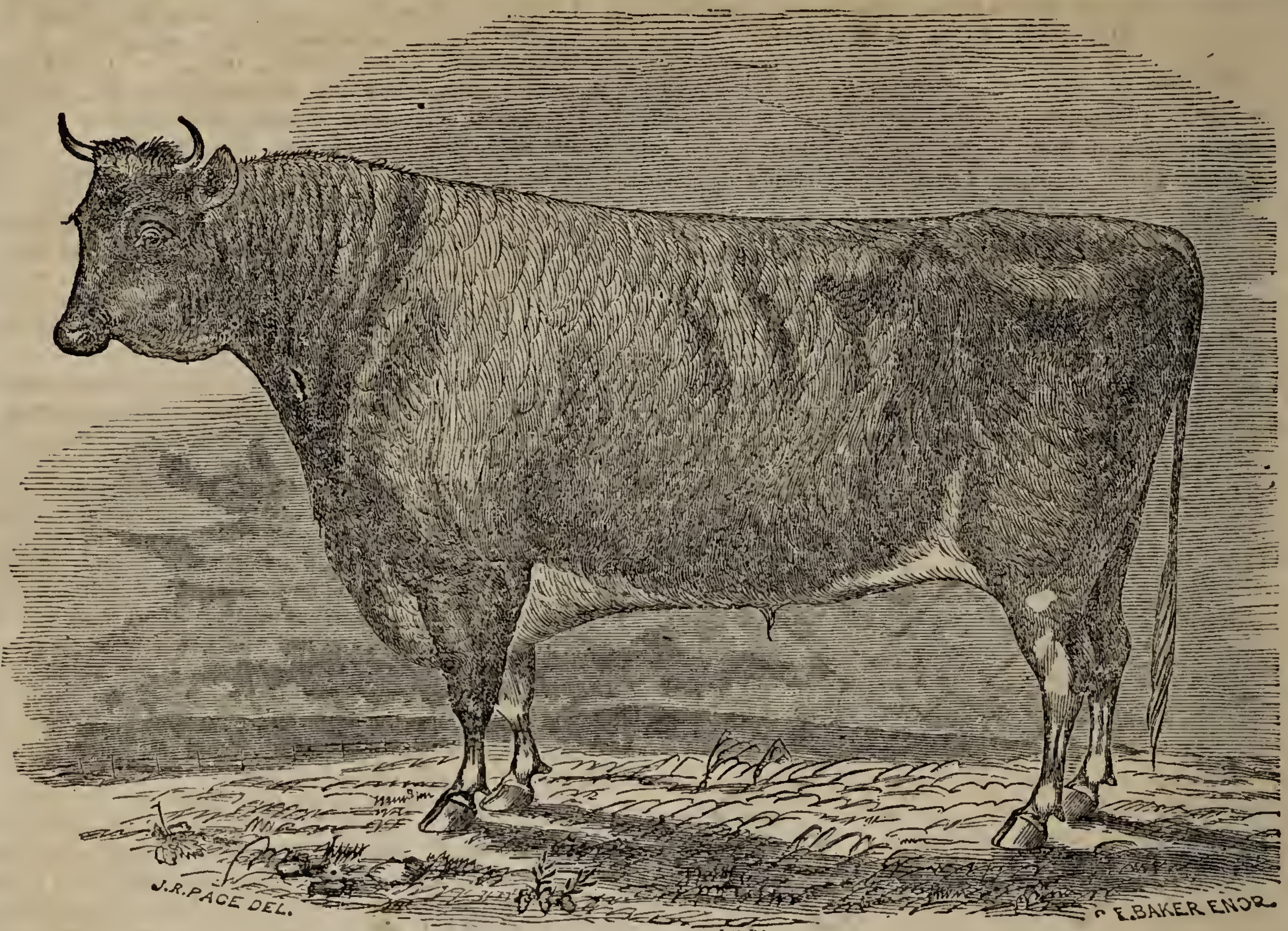
Eds. Co. Gent.—Will you oblige me and perhaps many others, by giving in an early number of your paper, a good recept for pickling cucumbers on a large scale, so that they will be certain to keep sound, and always be ready for use.

Waverly, Luzerne Co., Pa., Aug. 24, 1861. A. L.

Not understanding the mode of manufacturing pickles, we have consulted a notable housewife, who furnishes in substance the following directions:

Cut the cucumbers from the vine by means of scissors or a sharp knife, so as not to tear the end, as would be the case if merely plucked by hand. Wash them in cold water, and then lay them in the bottom of a barrel or jar, into which a layer of salt has been previously deposited, so that when successive layers of cucumbers and salt are made, the former will be imbedded in salt, the moisture which covers them tending to dissolve the salt, and convert it to brine. They may remain a long time in this condition—many keep them thus until sold in market. To finish the pickling process, take a quantity of good vinegar, but not too sharp or it will destroy the texture of the cucumbers, and give it the flavor of spices, by placing equal quantities of cloves, red and black pepper in a bag, so as to give about half a teacupful of this mixture to a gallon of vinegar, both to be boiled together. Then, having previously removed the pickles from the salt, and soaked them about eight or nine days in fresh water, changing the water each day; pour the hot vinegar, spices, pepper, bag and all, over the cucumbers, and in two weeks they will be ready for use. Some who make very sharp pickles, pour off the first vinegar, and make a second addition, keeping the first liquor for the next batch.

Probably the same process in substance is to be adopted on a larger scale. If any of our readers know a better mode, we should be glad to hear from them.

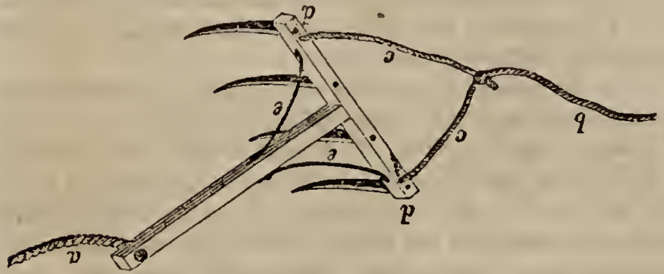

J.R. PAGE DEL.
E. BAKER ENGR.

ALDERNEY BULL "SARK."

Three years old. The property of R. L. Maitland, Newport, R. I. Bred by John Giles, Conn.—out of Bell—got by Jersey Prince, imported by Mr. Giles.

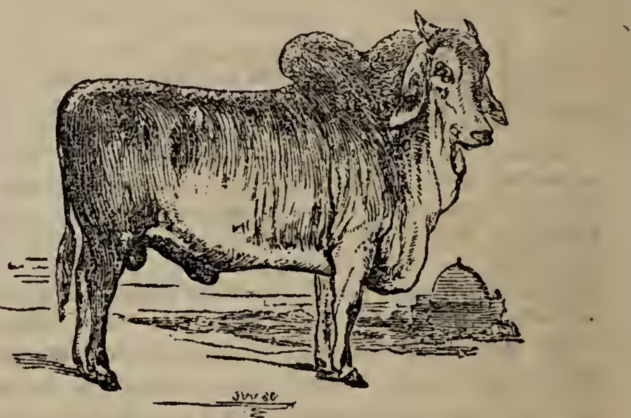
Pitching Hay by Horse Power.

In the August number of The Cultivator I notice an engraving and description of a horse fork by S. E. Todd, which he thinks the best in use. I have no doubt that it works well, but there is a more simple kind in use here, which answers every purpose, and as I have never seen a description of it in print, I will attempt to describe it, as it costs less and is not so liable to get out of order as a more complicated one.



It consists of a simple fork without any latches or springs. The handle is firmly mortieed into the head piece, and strengthened by the iron braces at *e. e.* To the end of the handle attach the long rope, *a*, which runs through the pulleys. The guy rope, *b*, is attached to the head piece by means of two short ropes, *c. c*, of equal length, secured in staples at *d. d.*

There is no "balancing" to do; but as the fork with its load swings over the beam or into the bay, give the guy rope a slight jerk, requiring but little effort, when the load will drop, the tines slipping out of it, and the fork may be lowered for another. I think it has one advantage over all others I have seen described—that is, *it is always ready*—no latches or springs to put in place when lowered, but it may be thrust in for another load immediately. There is nothing about it liable to get out of order, and it works with all ease. David Street. *Salem, O.*



BRAHMIN CATTLE.

The following specifications embody the chief advantages claimed for the stock, and clearly show that they cannot but prove an invaluable accession to the working animals of the South:

1. They are of fine size and beautiful proportion, and possess wonderful activity, strength and power of endurance.
2. They are perfectly adapted, by their peculiar organization, to the climate of the South, as they endure in their native country greater heat and fatigue than they would here ever experience.
3. Their milking qualities are equal to the best of Southern stock.
4. They are thrifty, and keep fat on scanty pasturage; and their beef is equal to that of any other stock, having been tested in Lexington, Ky., by many of the most respectable citizens.
5. They have been fully tested in the South, and the most sanguine expectations realized. Out of 150 sold, only one is known to have been lost, and that through accident.

A LARGE THREE-STORY BARN.

[The insertion of the following excellent general plan of a three-story barn has been unintentionally delayed, but it has lost none of its value by keeping. We are unable to give the plan of the grounds about the house on account of the large space they would require in an engraving.]

Messrs. Editors—Some three years ago I wrote a description of a barn which I had then lately built, for your paper, and as I was about communicating it to you, my attention was called to the subject of the horse pitchfork, which just then seemed to engross public attention. I therefore thought it prudent to wait a while, to see whether hay could be more easily pitched up than tumbled down; and notwithstanding the benefits of that fork, I am satisfied that hay will easier go with its gravity than be made to fly upwards.

The first thing then to be considered in building a barn, is to select a suitable site. The object was, convenient distance from the house—about 15 rods; supply of water, a hard bottom, and an easy drive through the barn, lengthwise with the roof, as the general floor, so as to throw the hay, &c., down, instead of pitching up. The stabling is in the basement.

The barn is one hundred and seventy feet long in the centre, besides an ell thirty feet. The creek through the yards is stoned up at the sides and filled back with clay, to prevent washing in from the yards. The creek runs through both cow and sheep yards, and twice under the barn.

The walls of the stabling, or basement, are of mason work, excepting at the deep bay and horse stable, and these are same distance from the ground, there being a depression there where the creek passes out from the yards and barn. The mason work is founded on the solid slate rock, which constitutes the floor of the stabling, cut down several feet in some places to form a convenient floor The timbers at each end of the barn rest against the solid rock, which forms the bank. The barn has an angle, near the centre, of twenty degrees from a right line, to fit the bank. The following figure represents the first story or basement:—

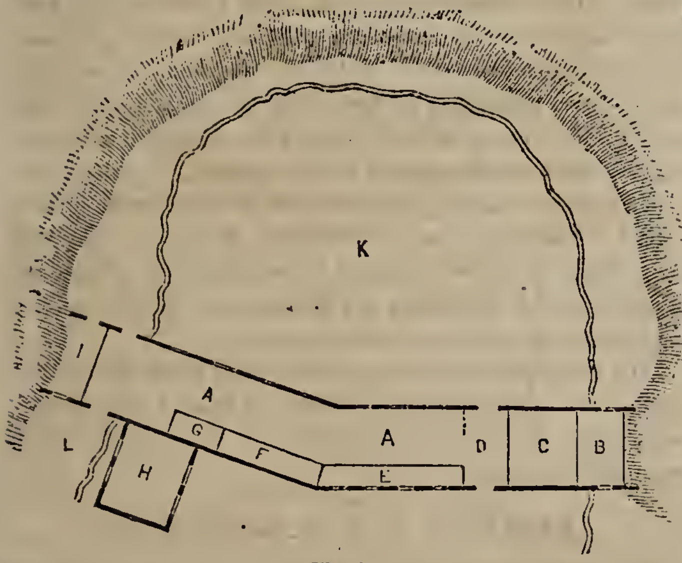


Fig. 1.

A A, Stables for cows and steers.
B, Horse stables.
C, Deep bay.
D, Sheeps' apartment.
E, Piggery.
F, Roots.
G, Hospital.
H, Slaughter-house and straw-rooms.
I, Henery.
K, Sheep-yard, surrounded by creek, and rocks 20 feet high, covered with trees.
L, Cattle-yard.

The basement has windows on both sides, except against the ell, the hospital, and root room, where the bank rises to the top of the basement. The windows are in two sash each, made to slide by each other.

The second story is all in bays, excepting the henery is two stories. The ell in second story, is a carriage-room and workshop; and a space eight feet wide, leading from the centre of ell across the barn, to let feed chopped above on the floor, down; and also grain threshed on the floor above, to fall down. There are scuttle-holes to pass the hay down in front of stock.

The third story has the main floor running through the whole length of the barn; this is even with the bank at each end, by which we drive in at one end and out at the other. This is above the beams. The floor is eight feet wide, and the space for the load is wider at the top—a cross section of which is represented by the following figure. This makes the passage for loads ample, and yet no waste room. This floor is ample for thrashing either with machines, flails, or horses; and the advantage of being narrow is, the hay can be rolled off on either side over the girth. There are timbers placed on each side of the floor, to keep the wagon-wheels in their place. Over the henery at the sides of passage floor, are cribs for corn; and at the other extreme end, are spaces at the side of the passage for mower, horse-rake, plows, &c. The hay-rack is drawn up to the peak of the roof over the floor by ropes.

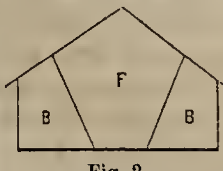


Fig. 2.
B B. Bays.
F, Floor passage.

The bays contain over 60,000 cubic feet, [and will therefore hold over 100 tons.] The capacity of this barn is equal to eight common barns, which cost about $400 each. The cost of this was about $1,500; so you will see that economy constitutes a prominent feature. I am about adding lean-tos on the sheep-yard side, as stabling for sheep or other stock; also a shed in the corner of the ell and barn nearest the house, where the ground rises to the second story, as a convenient shelter for horses and carriage, when harnessed and hitched on.

I find this barn as convenient, and I think more so, than any I have seen elsewhere. Z. A. Leland.

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[For the Country Gentleman and Cultivator.]

The Golden versus the Osier Basket Willow.

Messrs. L. Tucker & Son.—I have noticed several newspaper articles, recommending the Yellow Willow for hedges. My object in this communication is to prevent the farmers of this country from *injury*, by explaining the terms used in said articles. The variety of willow called invariably by foreigners *Yellow Willow*, is the Osier Basket Willow, and the Willow which is called Yellow Willow in this country, is there called the *Golden Willow*. The Golden Willow of Europe, called Yellow Willow here, is utterly unfit for fencing, for the reason that cattle will eat the tender sprouts as readily as they will clover—so of the Napoleon or Weeping Willow, and their twigs are useless. The Osier or Basket Willow is of a light green color during the summer, but upon the ripening of the wood the bark becomes yellow; it is not eaten by cattle or sheep, and the twigs cut from the hedges if not wanted for home use for Baskets, sell readily in N. Y. market at five to seven cents per pound. I have now in various stages of growth over one hundred rods of Osier Willow Hedge; that part three years old, is proof against cattle, pigs, ducks, geese, chickens, high winds, floods, deep snows, and the only fence on my farm that produces a cash income yearly greater than its first cost.

Victory, Cayuga co., August 8, 1861. D. L. Halsey.

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☞ Our foreign papers are full of the great Agricultural Shows—that of the Highland Society at Perth; the Royal Irish at Belfast, and numerous Local Associations of more or less importance—none of which can we take up at sufficient length to give a fair idea of their character and results. The receipts of the Highland Society were less than $7,000. The Irish Show appears to have been quite a success, both as an exhibition and as regards attendance—the "Lord Lieutenant" honoring the occasion with his presence.

Cultivation of Plants in the House.

The conditions necessary for success in the cultivation of plants in the house, are plenty of light and air, and a moderate temperature. A room with a southern exposure is the best, as affording more sunlight than any other, but an eastern or western exposure will answer. In rooms heated by coal stoves, or by hot-air furnaces, plants will not flourish, although they may live. One reason for this is that rooms heated to a temperature sufficiently high for comfort, say 65° or 70°, are too hot for plants, from 40° to 50° being the proper temperature for all green-house plants. The best room in which to keep them is one without a fire, but opening into another in which fire is kept, so that in case the weather is very severe, and there is danger of frost in the plant room, the door may be thrown open into the stove room, and the temperature raised sufficiently. In this manner, with judicious management with regard to airing and watering, and vigilance in guarding against the attacks of insects, plants may be kept in fine health and vigor, and with much satisfaction to the owner.

The stands made for holding plants are generally of wood, though very nice and handsome ones are made of wire, and are of various shapes, round, semi-circular or square. The round ones are handsome, but they must be turned every day, to give all the plants the advantage of the light. These stands should have the lower shelf on a level with the bottom of the window, and should be mounted on rollers, for convenience of moving.

One of the most common errors in the management of plants in the house consists in giving them too much water. Many persons keep the roots of the plants completely soaked in water all the time. This will never answer. The soil should always be moist, and the plants never allowed to droop for want of water, but there are very few who err in this direction. The condition of the soil can easily be ascertained at any time in the case of small plants by turning the ball of earth out of the pot, an operation easily performed by holding the hand over the soil, inverting the pot and striking the edge gently against any solid object, when the whole ball will come out in the hand. There are a few plants which can hardly have too much water, such as the Calla or Ethiopian lily. Others, such as all varieties of the Cactus, can hardly have too little.

The soil for plants in pots should be quite loose and not too rich; it will be much better to have it too poor, for growth can easily be quickened, if necessary, by the use of guano or manure water, but it will be difficult to check too luxuriant growth where the soil is too rich. For ordinary purposes a sufficiently good compost may be formed of equal parts of ordinary loose garden mould, thoroughly decayed horse manure and sharp sand, or if leaf mould can be procured, add an equal portion of that. Plants should never be over-potted. Pots too large are much worse than pots too small. We know many persons are afraid their plants will be starved and die unless they put them in large pots. Weak and unhealthy plants are usually thus treated, to give them more room, when in in fact they should be potted in small pots, and allowed to remain in them until they are well filled with roots, when they may be shifted, if in a growing state, into pots a size or two larger. Plants in bloom do not need shifting, but only those in a state of growth.

By the middle of this month, in this latitude, it will be necessary to take in many of the most tender plants. Geraniums, Heliotropes and Salvias should be got in early, the tops well cut in and the plants set away in a cool place for a couple of months to rest. The hardier sorts, such as Roses, &c., may be left out much later.

There are a number of green-house plants, which will not succeed well in the parlor; but there are many which can be grown with success. The Fuchsias, Heliotropes, Begonias, Jasmines, Chinese Primroses, Sweet-scented Violets, Geraniums, Carnations, Oranges and Lemons, Pittosporums, &c., will all succeed with little care. Mignonettes, Stocks, Candytuft, and many other annuals and biennials, may also be grown.

Hyacinths, Crocuses, Tulips, Narcissus, and other bulbs, will grow and bloom readily in rooms. G. B. H.

TRANSPLANTING STRAWBERRIES.

"Is fall a good time to set out strawberry plants, or would it be best to wait till spring?" N. G.

The best time for transplanting strawberries is early in the spring—the operation is then easily performed, and nearly all the plants will live and grow; and if they are of productive sorts, they will bear a small or moderate crop the same season.

The next best is just after bearing; or about midsummer. But more care and labor is then required, and some of the plants are apt to die. All the large leaves must be taken off, leaving only the young or opening ones—the roots should be previously dipped in mud and then spread well out at setting—the earth settled about them by pouring in some water, and the surface mulched with an inch or so of fine manure, being careful not to cover the crown of the plant. They will grow considerably, and bear the next year.

Setting out in autumn succeeds well if the proper requisites are attended to; but carelessly done, usually fails. The earth should be well packed, or *trodden hard*, about the plants, or the freezing will lift them out and kill them. They should be of hardy sorts, to endure the winter; the Wilson is especially adapted to this purpose. And they should be protected by a covering that will not settle down compactly on the plants and smother and destroy them. Fresh moss is perhaps the very best thing for this purpose, or the leaves of evergreens, or rather the small shoots containing the leaves. With this care the plants will keep well and and start early; without it they will very likely be thrown out and frozen to death. Varieties inclining to be tender, as the Hooker and Hovey, are not well adapted to autumn transplanting.

The principal advantage of this season is for plants that have to be carried a long distance, or from a remote nursery, from which a supply could not be obtained early enough in spring.

REMEDY FOR RINGWORM.

The North British Agriculturist says that the disease locally known as ringworm or titter, which shows itself about the head and neck of young cattle, in the form of whitish dry scurfy spots, can be removed by rubbing the parts affected with iodine ointment. The disease may also be combated by the use of sulphur and oil; iodine ointment is, however, to be preferred. As this skin disease is easily communicated to the human subject, the person dressing the cattle should wash his hands with soap and hot water after each application of the ointment.

[For the Country Gentleman and Cultivator.]

Management of Barn-Yard Dung---No. 2.

"Take care that nothing be lost," is almost of divine injunction. Of nothing of equal value, are farmers, ordinarily speaking, so lavish, or rather more to the point, perhaps so regardless, as in their management, or rather mismanagement of barn-yard dung and compost heaps. If the money received in return for the sale of a crop produced on a tilled field, be of any importance, then the more of it obtained, in return for the investment of stock and labor, the better to be sure. The waste or loss of the fertilizing elements of barn-yard dung, after it has been voided, and before it reaches the cultivated fields, is really the loss of so much money in the sale of the crop. As a matter of economy then, every farmer should take care that his barn-yard dung and compost heaps are not exposed to being washed and drenched with the falling rains, before they are removed to the ground where they are to be used. Then if the soluble elements are washed out before the dung is incorporated with the soil, or any part of them, the soil drinks them in, so to speak. The loss by neglect was shown in a former article.

Travel through the Eastern and Middle States where the cattle and horses are generally stabled for nearly half the time during the year, and what proportion of the dung heaps thrown from the stables are sheltered from drenching rains? Many I have noticed are under the eaves of the barn, where they are washed, not only with the rain that falls upon them, but also by the water that falls upon the roof. Sometimes the dung-heaps are thrown out by the side of the highway, so that the soluble elements washed out are lost. Sometimes the manure is spread out over the yard, when it has been demonstrated, that when ready for use, or when it was wanted, "two-thirds of its nitrogen and four-fifths of its soluble inorganic matter" had been washed out. Prof. Anderson of Scotland says that experimenters have shown that well-rotted dung contains from 5 to 6 per cent of nitrogen, and about 2 per cent of phosphates. When carelessly managed, the ammonia has been reduced as low as three-twentieths of 1 per cent.

The urine of domesticated animals is said, by chemists, to be equal to the solid excrements for fertilizing purposes. How many farmers have made such arrangements as enable them to save the urine voided in their stables? Some, but not all, who have barn cellars do this. Others who have no cellars, save a part of it by the use of various kinds of bedding, or by putting loam under the stable floor. But generally speaking, a large part of the urine goes to waste, there not being the slightest provision made to save it. Now in consideration of the fact that the urine is all lost, or nearly all, and that the dung-heaps are washed and drenched by rains and melted snows, is it not quite evident that farmers generally are very regardless of saving their manures, or in case they do, are they not frequently rendered nearly worthless by deterioration?

Then with regard to compost heaps, are they not frequently exposed to being washed with the falling rains, and thus deprived in a large degree of their soluble qualities? Every compost heap should be sheltered from rains by a temporary shed, built for the purpose if need be. Then, besides saving the soluble elements, the farmer can set his men to work it over of a rainy day. This would be a decided advantage in regard to labor. How many of the readers of the GENTLEMAN and the CULTIVATOR have tried this economic method?

The dung-heaps, too, should be sheltered by a roof over them, if it be naught but thatch, such as can be gathered on almost any farm in August, and which ultimately will fall into the manure heap, when it can be replaced again from the same brake or swamp pasture-patch. Will farmers consider these hints?

The value of barn-yard dung will depend largely upon the manner in which domesticated animals are fed. If fed on rich or highly concentrated food, the voidings will be much richer than if fed on poor keep. Farmers should aim so to manage their manure heaps, that they can save the nitrogen, and convert it into ammonia, and then be able to keep it until ready for use.

As already indicated, the amount of nitrogen in barn-yard dung will depend upon the nitrogenous quality of the feed. Oil-cake, grain, and good hay, are all essential elements in making rich dung. As absorbents, loam, sand, and dry peat, may be used. Dry peat, when it can be had, is best; for it not only absorbs the urine, but fixes the ammonia by converting it into humate, or partially so. Many ways have been sought out and recommended to prevent the escape of ammonia from the dung heap; but says Prof. Anderson, there is not half so much danger of losing the ammonia by evaporation or volitization, as there is of the loss of the soluble matter by drenching rains. This, let it again be repeated, is the great source of deterioration in the value of dung-heaps and compost heaps.

The nitrogen of the dung-heap is converted into ammonia by fermentation. Farmers are aware that dung, especially that voided by horses, heats and loses in bulk. In stirring it, the presence of ammonia is at once perceptible. When fresh dung is applied to the soil, this change occurs there. Hence the importance of well fermented manures for immediate effect upon a growing crop. Rotten manure is to be preferred to fresh dung, when the former has been well managed; otherwise, fresh manure is preferable, on the ground that of two evils, choose the less.

Barn-yard dung when ready for use, or when it is necessary to carry it to the field before it is to be applied to the soil, should be covered with loam so that it shall not be washed there by rains. Some prefer spreading it at once, however, where it is to be applied, adding, that the loss of ammonia is slight, compared with the advantage of the thorough incorporation of the soluble elements in the soil by the rains falling upon it, as the soil is a ready absorbent. The mode of applying manure must be reserved however for another occasion. The present object is to impress farmers with the necessity of saving their manure, or the management of the dung-heap. MENTOR.

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Twenty-Six Tons Corn Fodder to the Acre.

EDS. CO. GENT.—I cut fodder corn to-day, as it began to lodge in the *lighter* portion. It was just in the silk. As it is thought very heavy, I measured off a plot 20 by 15 feet, and weighed it accurately. It weighed 406 lbs., being 26 tons per acre. It was drilled 2½ feet apart, and covered and cultivated exclusively by horse power on the Gage cultivator spoken of in a late no. of the Co. GENT. It was only seventy days old from planting. It was not the best in the field—only a little if anything above the average. It seems a large growth of seventy days, with no hand-work about it; I shall weigh the same when cured. S. W. HALL. *Elmira, Aug.* 19, 1861.

P. S.—Can somebody tell the proper time to cut this, to secure best feed? I hate to cut it before it is half grown, if it be just as good later.

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CLEARING LAND OF STONE

Speaking of the ill effect of the entire removal of stone from some soils, O. W. True, in the N. E. Farmer, says, "There were but a few stones upon a moist loamy, rich soil, laying upon a gravel pan almost impenetrable to water, but when the loose ones and those that the plow came in contact with, were dug out, the soil seemed entirely changed. It was later in the spring, and the grass did not hold out but about half as long as before the stones were removed. Had it been underdrained, I am confident it would have been much improved, and instead of being a week later in seed-time, would have been a week earlier than originally." The removal of "the natural attractors of heat," and the loss of the mineral matters supplied by the wearing away of the stones, is his explanation of this difference.

NEW-YORK STATE FAIR FOR 1861.

The Twenty-First Autumn Meeting of the New-York State Agricultural Society was held at Watertown, Sept. 17–20. It was successful beyond the anticipations of many friends, and even officers of the Society, although below the exhibitions of some previous years in several classes, and in attendance—a fact which could not have been otherwise, from the distracted condition of the country, and the engrossing nature of the crisis through which it is now passing. There were some other obstacles with which the Society had also to contend, from the lateness of the season in that part of the State, requiring more attention to farm duties at home; from the threatening aspect of the skies, which, although clear from Monday until Friday at Watertown, were cloudy, and in some places rainy, at points near by; and from the location of the Fair, which, although among an enlightened and progressive class of farmers, and in a fine Agricultural region, was a little too remote from the usual lines of travel to invite attendance from all other parts of the State. But that—under such circumstances—the expenses and premium list of the Society should have been fully met, is no less gratifying to its Board of Managers, and an honorable continuation of its previous history, than it is creditable to the public spirit and enterprise of the place in which the Fair was held, and to the determination of the Farmers of New-York to meet that enterprise with liberal and spirited support. The receipts sum up to $7,910.65.

As an exhibition of Stock it was fair and rspectable. Among the *Cattle*, the Short-Horns of Hon. A. B. Conger, Brodie, Campbell & Co., T. L. Harison, J. B. Garrett, A. M. Underhill, Cass & Butts, A. Stevens, and others, represented the breeding herds of several widely separated districts in this State, while T. G. Ayerigg of New-Jersey, showed the spirit with which he has undertaken the task, by exhibiting some fine specimens lately purchased by him from R. A. Alexander of Kentucky. Of the Devons there was also a fair turn-out; and although here, as among the Short-Horns, some of our best herds were unrepresented, the exhibition was still sufficient to prove the existence of a high average of merit among the breeders of New York. The welcome names of exhibitors of Herefords at former shows were again found upon the entry books of 1861, and this class was well sustained. The Ayrshires were out in good numbers; of Alderneys there were a few specimens; the Grades (mainly Short-Horn,) were of such excellence as to constitute a marked feature; milch cows, and the different classes of oxen and steers, were full and good. The Fat Cattle included a very nice 3 year old steer, from Judge Sackett of Seneca Falls, who had previously offered $10 towards a purse of $50, to go to the best animal in this class that might be shown, in the hope of drawing out some of the best cattle of the excellent grass lands of Jefferson, Oswego, St. Lawrence or Franklin; two other gentlemen had added each a similar amount, but much to the regret of the Executive Committee, the total was not made up, and there was no competition.

The *Horses* hardly constituted as attractive a department as we might have anticipated in a more favorable year from the locality; they were probably, however, quite up to the average. We refer to the Premium List as published in the Country Gentleman of September 26, for the names of successful competitors, but cannot forbear referring especially to the thorough-bred Stallions shown by Hon. A. B. Conger and E. Corning, Jr., and the two-year old colt of T. G. Ayerigg of New-Jersey. The last-named gentleman also exhibited a fine pair of farm mules with substantial wagon and harness. These would have made a prominent appearance in the cavalcade of the last day, if it had not been prevented by the rain; where, also, we had hoped to see the beautiful ponies shown by Gen. Hungerford and others, in contrast with the horses of larger frame, and the well trained bull-in-harness of Mr. Thompson of Ballston, leading off in stately march the long line of draught cattle by which he would have been followed.

But we cannot linger as we should like, here and elsewhere. The Sheep were *good*—such Leicesters as those of Beattie and Snell of Canada, and Winne of Albany Co., or such South-Downs as the rams from the Thorndale flock, and the two pens exhibited by Mr. Ayerigg—recent purchases from Alexander of Kentucky—having been as a whole, rarely equalled—perhaps never excelled—at our State exhibitions. The admiration elicited by the *Swine*—both in large and small breeds was very great. The Exhibition of *Poultry* was quite full and good. The *Plowing Match* was held upon a piece of land not in good order to show good work to the best advantage, but was well contested and the land well plowed. The combined cultivator, roller, seeding machine and plaster distributor of Col. Duane of Schenectady, was tested here, quite satisfactorily, as we understood, to the committee and the spectators. In the *Dairy Hall*, Woolworth, Gowdy and Clarke, of Lewis County, Webb, Ball, Rockwell, Todd, Clift Eames, and several others of Jefferson County, were exhibitors and prize-takers on butter and cheese. A liberal sample of the premium butter of Geo. Webb has been kindly presented us for trial.

The collection of *Agricultural Implements* was excellent, but not so extensive as in some years. Nearly all the principal mowers and reapers of established reputation were on the grounds, such as Wood's, Ketchum's, Kirby's, Hallenbeck's, the Ohio, Cayuga Chief, the Buckeye, and others. Johnson's Cornstalk cutter is a simple attachment to a mowing machine, and was exhibited in connection with Ketchum's one-horse mower. The large exhibition of endless-chain horse-powers, shows the increasing estimation in which they are held by farmers. Among other articles worthy of particular notice may be mentioned the wind-mill of E. W. Mills of Onondaga Co., Boll's Patent Stone-Lifter, Bullard's Hay-Spreader, and the Cheese Vats exhibited by D. W. Maples of Homer, Cortland Co.; O. O'Neil & Co. of Utica; H. & E. F. Cooper of Watertown, (Roe's vat and heater;) and Wm. Ralph, Holland Patent, Oneida Co.

The display of Fruit, such a season as this, as was to be expected, was quite limited, but the specimens were in some instances unusually fine. The largest contributions were those of Ellwanger & Barry of Rochester, and Smith & Hanchett of Syracuse. The former had 85 varieties of pears, 60 of apples, 9 of exotic, and 4 of native grapes. The latter contained 25 sorts of the apple, 50 of pears, and 6 of native grapes. Both of these collections contained specimens of much interest, or new or rare sorts, some of them finely grown. George W. Lawrence of Oswego, exhibited 13 dishes of as many different varieties of plums; among them we observed Coe's Golden Drop measuring two and a half inches long. There were also some large collections of apples.

In the *Miscellaneous Departments*, the exhibition was not quite as large as has occasionally been the ease, but the large building devoted to Domestic Goods was well filled. *Floral Hall* was unique in design, and had been ornamented with great taste and labor—the bright scarlet berries of the Mountain Ash and the white blooms of the common Everlasting (here growing as a weed in the field) intertwined in large clusters with the evergreen wreaths and festoons, so as to produce a very pretty effect.

The Address was delivered on Friday, in one of the buildings—owing to the rain—before a very large audience, by Wm. M. Evarts, Esq., of New-York. After an appropriate and beautiful introduction, Mr. E. devoted more than an hour to the discussion of the present state of the country, in which, as he justly remarked, the farmers of every locality were equally and deeply concerned. He was listened to with frequent and earnest applause, and followed by cheers for the Union, and an enthusiastic vote of thanks for what he had said in its support.

Agricultural Discussions at the State Fair.

Management of Manures.

At the conclusion of his address, the subject of *Barnyard Manure* was taken up, and the best means of saving and applying, discussed for an hour by practical farmers present. President Geddes said the result of his observations and experiments, were, first, that the manure yard should be so made that none of the manure should run off; secondly, that there should be plenty of straw to absorb all the droppings of the cattle; and thirdly, that the coarse manure thus made should be placed in piles with square sides, and with flat or concave tops, to catch the rains. If quite strawy, the heaps should be made as high as the laborer can easily pile them, to induce fermentation, and the tops should be *dishing* to receive water. In July, the outside should be cut down with a hay-knife, and the outside parts cast on the top, these being the only undecayed parts, the rest of the heap being already well decayed. The manure will thus be in good order for wheat lands, and will greatly assist the growth of the subsequent crop of clover. This is the best mode of managing manure on grain farms, where an abundance of litter is used for cattle. He has now a stack of straw containing at least a hundred tons, (last year it would have sold for $300 to the paper-makers,) and not cattle enough to work it down; to put this under shed would be simple folly—where there is little straw and much dung, a shed may be useful. Where there is much sheep dung, it would fire-fang if covered. Dairymen will want a shed; grain farmers, who have much straw, corn-stalks, &c., will not. As for his own mode of farming, he would thank no man for furnishing a shed, however perfect, even with a slated roof, for if the manure were under it, he would have to cut it out, and it would be of no use. He prefers to apply manure to wheat or grass; if used for corn, it fills it with weeds. He applies it to the surface of the wheat, and always drills in the seed,—remarking, in passing, that although once opposed to drilling, he was now "converted to the faith," and thinks it the best and most certain way. If the manure is applied to the surface, the rains carry it into the soil; but if buried too deep, it is difficult to get it up again. He thinks clover manure of the utmost importance. It gives a crop of corn that needs no hoeing, but horse cultivation only. He has thus raised sixty-seven bushels to the acre, and the land was left cleaner than in other fields with hoeing. Clover also forms an excellent manure for other grain crops, oats, barley, wheat, &c. He has had wheat on clover sod at the rate of 33 bushels per acre for 20 acres, and regarded the clover *at the bottom* of this heavy product. But he wants the manure in order to get the clover. He sows plaster on wheat, oats and clover, evenly by a machine, at the rate of two bushels per acre.

Moses Eames remarked that most farmers largely wasted at least half their manure, by not securing the liquid parts. He saves all in winter by keeping his cows in stables, and absorbs the liquid by litter. He thinks a load of this manure as efficacious as a load of plaster, and applied to meadows has obtained from them over three tons of hay per acre. He prefers to apply it in the fall, but never when the ground is frozen, as the rains would wash much of it away from his hilly land to that of his neighbors. He usually applies thus five loads of 40 bushels each per acre. He prefers to compost it with muck or earth, to render it finer and more friable, and insure its spreading. Fresh and wet, it does not spread evenly. He remarked that farmers might as well attempt to raise crops without manure as bankers to bank without money. His top-dressed meadows have yielded him this year 240 tons of hay, at about two and a half tons per acre. In one case, he had four tons per acre, on grass land seeded from the fresh manure, the cattle having eaten hay with plenty of seed in it—no weeds were thus produced but thistles, and these were all killed by mowing the first year. He prefers to apply his winter manure in spring, and plow it in not more than three inches with a gang plow—if buried deep, he never gets "its strength" up to the surface again.

In answer to a question, Pres't Geddes said his preference was never to apply manure directly to corn, but for avoiding weeds, to manure his clover, and put on corn afterwards.

—— Andrews, of Conn., said that farmers in that state had scarcely enough straw to litter properly their cattle, and he applied it in spring, in a green state, to corn, which was planted on ridges made by throwing two furrows together. The manure is wheeled out during the winter under a shed, piled up, and is ready for spring application. A drain from his yard carries the liquid manure to the meadow, and the irrigation thus given has produced heavy crops. He sows a half bushel of equal parts of clover and timothy per acre; and has found that thick sowing produces fine fodder for cattle, instead of the coarse feed resulting from thin sowing.

A gentleman whose name was not heard, had never found any evil result from drawing out and spreading his manure during winter—his land was not hilly, and the rains did not wash it off, on a frozen surface. He uses muck, peastraw, and other refuse matter for his hogs, and makes from them over twenty loads of good manure yearly; and whenever the supply of straw is small, carts in large quantities of leaves from the woods for littering his cattle.

T. S. Faxton of Utica, spoke of the great improvement which had been made among farmers generally in the saving and management of manure. He said that so long ago as 1820, it was common for the Dutch farmers to draw out their manure in winter, and place it on the ice of the Mohawk river, in order that it might be carried off out of the way on the first thaw. The manure "filled the land with weeds," and that appeared to them a sufficient reason for regarding it as a nuisance. The subject is now better understood. He has found out conclusively that the sooner manure is applied to land after being dropped from the animal, the more we get from it. If piled a year, much of it wastes.

S. Walrath of Canton, St. Lawrence Co., said he had learned much in twenty years—his most valuable crop now is his manure crop; then it was his poorest. He carefully excluded foul seed from his manure, allows no weeds to ripen, and cuts his hay green, or before the seed have formed. He can make finer and sweeter butter than his neighbors who allow cows to eat bad flavored weeds.

T. C. Peters of Genesee Co., remarked that one class of farmers cannot do as others may be able to—they differ in their management, but both are right for the kind of agriculture each practice. He thought that dairy farmers managed their manure best—that manure sheds are not necessary for our climate, and that any amount of rain will not injure manure if the discharge from the eaves of barns does not fall upon it. He makes a distinction between *barnyard* manure (often containing much straw) and *stable* manure; stable manure proper should be applied to the current crop; but yard manure should be first piled to rot.

To embody the substance of the discussions, the following resolutions were adopted:

1. Manure which consists chiefly of the droppings of animals, should be applied as soon as practicable to the soil.
2. Manure consisting largely of straw, cornstalks, or other fibrous matter, should be first rotted to become fine.
3. Manure should be applied at or near the surface of the soil, or should be slightly buried.
4. For hoed crops, and especially for corn crops, it may be buried deeper than for straw crops.

AUTUMN APPLICATION OF MANURE.

There is nothing connected with manure of more importance than its right application. Yet the whole theory is a very simple one. If diffused finely through the soil, it is useful ; if not so diffused it is, of course, precisely the same as if absent. The best way, consequently, to apply a given quantity of fertilizing material is in the state of solution—that is, as liquid manure, so that it will come in contact with every particle of soil. The worst way is to throw it in coarse lumps or masses over the ground, and, by bad plowing, half cover some of the coarse lumps, and leave others uncovered. If the season happens to be very wet, a small portion of the soluble parts may find its way into the soil, and ultimately be useful to the plants ; if the season is dry, the uncovered parts may be of a little possible benefit as a mulch, and the covered parts prove positively injurious by rendering the soil drier, without giving it any rich particles.

But in ordinary practice manure cannot be converted to liquid, and then applied in water carts. The same result may, however, be attained in effect by a different and far easier management. Let the rains dissolve the soluble manure on the spot where it is wanted, and carry it directly among the particles of soil. This cannot be done in summer, when it will be dried up rather than dissolved. It is only to be accomplished by autumn and spring rains, or during winter thaws. That is, *spread manure in autumn whenever practicable.* The best farmers attach great importance to this practice. The finest fields of corn that we have seen this year, were in nearly every instance raised on sod that had been manured the previous autumn on the sod ; and after a few inches of the top soil was well soaked with the liquid manure thus furnished, (assisted in its downward progress by the roots of the grass,) and just before planting time, this grass was inverted to a moderate depth, and the corn planted upon it. The same advantages have resulted from autumn manuring for any other spring crop requiring a fertile soil, or in the preparation of land for the spring planting of fruit trees; or in enriching the ground around young trees already planted.

But the question occurs to many, " how shall we get manure in autumn? our animals manufacture it for us only during winter." In answer, it may be observed, that some manure is made during autumn, more particularly from horses; this should all be spread before or on the commencement of winter; another portion, and a very large one, consists of the droppings of cattle all through winter, mixed with cornstalks, straw, &c., and too coarse for spring application. This should be thrown into heaps to decay through summer, and if some soil, turf or muck, previously carted into the yard, should be mixed with the heaps, all the better for the preservation of all parts. If these heaps are sufficiently decayed by early autumn, they may be applied to wheat fields, after the land is plowed, and before harrowing, as we have elsewhere described; but if too coarse still, for this purpose, then they may be spread on land intended for spring crops.

Nearly all the benefits of autumn manuring may be secured, where cattle and other animals are kept in stables or warm basements, by drawing out the manure during the comparatively leisure time of winter, and spreading it at once on the land. The winter rains, whenever they occur, and all the spring rains, will give it a thorough washing, and carry the liquid into the soil ; but such places must be selected for this purpose, as will not favor the accumulation of water into brooks or streams, and thus carry off the manure altogether. Grass lands are much the best for this treatment, by tending to retain the manure.

Nothing is better for gardens that are to be enriched for spring crops, than autumn or winter application of manure ; and newly planted trees, dwarf pears, strawberry beds, &c., receive a great deal of protection against cold by such coatings, which are to be turned in in spring.

Rules for Arranging Ornamental Grounds.

First of all, ascertain from which direction the prevailing winds blow, so as to give protection by planting, for nothing can scarcely compensate for sweeping winds in winter penetrating the house and raking the garden.

Secondly, examine the finest points of distant view, so that these may be preserved by leaving the planting open, and concealing by dense foliage such points as are undesirable. Where prevailing winds come from the finest points of prospect, a choice of evils must be made, and most commonly a portion of the distant view may be retained through vistas, and most of the grounds be well protected by shelter.

Thirdly, as *economy* is of vital importance—that is, affecting as much as can be done with a given amount of means—grading the ground, the most expensive of all kinds of improvement, should be nearly avoided, and the plan adapted to the ground by arranging the walks to existing levels, and planting trees and shrubs to improve all inequalities of surface, so that what might otherwise seem a defect, may become a positive beauty, and appear as if selected and adopted on purpose. Economy will always be promoted by a large share of grass lawn as compared with flower beds, the lawn quickly receiving its finishing touch with the scythe, while beds are trimmed with far greater labor.

HUNTING WILD BEES.

This is a subject on which I have never seen an article in the Dollar Newspaper. It is well known that our forests are the homes of many swarms of wild bees. They go off from the domesticated colonies, and seek refuge in the hollow of some good old tree, and there deposit their honey. It requires some experience and skill to hunt wild bees with hives. The outfit for bee hunting is a bee box, properly constructed with comb and honey, slightly scented with oil of anise or thyme. The box should have a glass in the top or side, covered with a sliding panel, through which the comb and bees can be seen, and to admit light. The bee hunter secures from a bunch of flowers a few wild bees in his box. The panel is now removed, and the light admitted ; or, if he can find no wild bees on the flowers, he burns a piece of honeycomb upon a heated stone, the scent of which draws plenty of wild bees around him. He places the open box near the altar of incense, and the bees soon alight upon the honeycomb, and begin to feed. Having in one of these two ways secured a few working bees, he places the open box upon a high stump, and sits leisurely down to watch them. The bees having supplied themselves with a freight of honey, depart for home. Rising from the box, they fly in circles about it, and then take a bee line or straight course for home, or for the bee tree. Now comes the hunter's coveted opportunity. He wishes to get the line of the swarm, as it is called. With a practiced eye, he watches the bees until they are beyond his sight, and finally determines by their unerring course in a straight line, the direction of the bee tree. Having got the line, he closes his box on the bees, and moves on towards the tree. He then takes a new stand, and makes new observations, and thus gradually nears the wild colony, searching all the while for them in every hollow tree, until he at last discovers their retreat. An experienced bee hunter having once got the line of the swarm, seldom fails of finding it. Large quantities of honey have often been found deposited in the capacious hollows of some of our forest trees. *Dol. News.*

[For the Country Gentleman and Cultivator.]

A New and Wonderful Kind of Rye.

Messrs. Editors—A few days since I received from O. C. Wheeler, Esq., Corresponding Secretary of the California State Ag. Society, (through the agency of the Patent Office,) a small package of "Bingham Rye." Accompanying the rye, was a printed circular, of which I herewith furnish a copy. The circular is headed "From the Journal California State Ag. Society."

Extraordinary Grain.—"Through the politeness of M. W. Belshaw, Esq., Wells, Fargo & Co.'s agent at Fiddletown, El Dorado Co., Messrs. J. A. Bingham and Bro., have forwarded to the rooms of the Society a sample of rye, of such unusual size and beauty of berry, and such unique development of head, as to surprise and delight every man who has examined it. Its history, as far as it has been ascertained, is that it was found growing wild on the top of a high, dry hill, in a cold bleak portion of Carson Valley, Nevada Territory. A few grains were gathered, and from them the Bros. Bingham have made the following test:

"They planted in November last, about one pint, on the top of a hill of yellow and apparently unproductive soil. The object was to test its capacity for enduring drouth, cold and destitution of vegetable mold. Any of our common cereals will flourish in our valleys, and under favoring culture, but if a variety can be developed capable of success, under forbidding circumstances, a real addition will have been made to the productive resources of the country. The experiment of the Messrs. Bingham furnished them with about one hundred pounds of grain, of a character beyond all comparison with any rye we have before seen or read of, and that too, under circumstances so very unfavorable as to generate the belief that it will succeed *anywhere*. We have divided the parcel sent us and forwarded samples to all the State and Colonial Agricultural Societies on the continent; and shall place a sample on exhibition at the World's Fair in London, next spring."

The above is a true copy of the paper sent out with the rye by Mr. Wheeler, Corresponding Secretary of the State Ag. Society of California.

I do not in the least call in question any of the statements as above, in relation to how the rye was found growing wild, nor of its adaptation to yielding an hundred fold, "on the top of a hill, of yellow and apparently unproductive soil"—nor do I call in question the honesty of the Bros. Bingham, or the faith and sincerity of Mr. Secretary Wheeler, but I do say, without the fear of contradiction or refutation, that this boasted rye, is nothing more nor less in its variety, and identical in every respect, with what was largely distributed two or three years since from the Patent Office, labelled "Polish Wheat, sometimes called Giant Rye," and to prove to your satisfaction, friend Tucker, that I am right, I forward with this, samples of each, the Polish and the California grown, in separate packages, and duly marked, and if you will mix them together and can then tell "which is which," I will frankly admit that you possess greater discriminating powers than I do.

Just about two years ago I sowed eight or ten square rods with this Giant rye—for the packages were marked, "☞ Sow in autumn." The rye looked well when the first snows came, but every plant on the piece, with one exception, *winter-killed*. The plant that survived produced several heads with wonderful long beards. I saved at the time of sowing, about a gill, intending to plant it in the spring; but the package got mislaid, and I now have it on hand, which has enabled me to furnish you with the sample now forwarded.

Winter before last I sent a small quantity of this rye to a friend in an adjoining county. Last winter I received a letter from him, saying he sowed the seed in the spring of 1860, and that it yielded well, it being a "spring grain." I will write to my friend for farther information, and communicate the result.

One thing is quite certain, it is a splendid grain. But if it possesses the wonderful productive qualities at the north that it has exhibited in California, it is strange we have not seen it noticed in some of the agricultural journals before this late day.

By way of caution, I would here suggest to my brother farmers to keep cool for the present about this "giant rye," and not pay two dollars per ounce for seed till something more definite is known respecting it.

Mr. Wheeler, in his letter to the Patent Office, dated "Sacramento, Cal., Aug. 5th, 1861," says "it has been advised to call it "Bingham" rye, in honor of the intelligent gentlemen who have developed its qualities. If you have no objection you can so denominate it."

I will just add, that "Giant rye," "Polish wheat," and "Bingham rye," are one and the same thing. The knowledge of this fact may prevent some mistakes hereafter.

Warner, N. H., Sept. 5, 1861. LEVI BARTLETT.

We are much obliged to Mr. Bartlett for the samples of grain enclosed with the above. They are unquestionably identical.—Eds.

* * *

[For the Country Gentleman and Cultivator.]

EXPERIMENT IN GRINDING BONES.

Having one of Joice's Starr grain mills, which has been illustrated in the Co. Gent. and Annual Register for 1860, as I consider it of very little value for the purpose for which it was manufactured, and as I was about to throw it aside for old iron, it occurred to me that it would subserve a good purpose for grinding bones. Accordingly we went to the woods with the team and collected a lot of bones of cattle, which had lain there more than two years, and put the mill in operation with two horses hitched to the lever. There were some large shin bones, and thigh bones, which appeared strong enough to break the mill to fragments; but they snapped and fell to fragments almost as readily as if they had been ears of Indian corn. We then put in jaw bones, teeth and all, and an entire skull, and they went through with very little power, I think not half as much as is required to grind Indian corn. We then took a very large new bone, from which the beef had just been removed, and it was reduced to small fragments, as if it had been a piece of half-rotten wood.

We adjusted the mill to grind about as fine as bark is usually ground at tanneries, for tanning leather. There is so much marrow and oleaginous matter in bones, that it would not be possible to get them through, were the mill adjusted to grind them as fine as coarse meal. It is not necessary that bones should be reduced to a very fine powder, although the finer they are ground, the greater the effect will be immediately on any crop. If they are ground coarse, their fertilizing influence will be felt on crops for years to come; and therefore, nothing will be lost in the end, by not having them reduced very fine.

After a lot of bones have been run through the mill, the largest fragments can be run through the second time, and thus reduced as fine as desirable.

I found that there is a great amount of marrow in large bones, even after they have lain bleaching in the weather for several years; and this has a tendency to cause the mill to clog; although mine never clogged but once, in consequence of it, and then by letting up a little on the set screw, the bones passed through freely.

"Will it pay to grind bones in this manner?" Most assuredly it will. I have not had a sufficient amount of bones to experiment with, as I desire, but I have ground enough to satisfy myself that a span of horses will grind more than one hundred pounds in an hour with ease; and it could be performed when teams and hands would be idle, or by boys, for whom it would be fine amusement, to see them reduced to fragments. And, more than all, one hundred pounds of such bones as farmers would collect and grind up, would be worth more than twice as much as the ground bone of commerce. This that I have ground smells very strong, and is very rich in fertilizing material. S. Edwards Todd.

* * *

An Old Turtle.—Paoli Lathrop of South Hadley, has had the same marked turtle visit his garden for thirty successive years. The only trouble he makes, is to taste the cucumbers.

Inquiries and Answers.

Lime—Daisy Seed—Muck.—1. Will lime make a good dressing for grass and corn on muck land? If so, when should it be applied, in what manner, and what quantity per acre?—2. Is there any way to destroy white daisy seeds, and other foul seeds in manure, without injuring it? If so, how?—3. Will muck, drawn out this fall and composted with ashes or lime, make a good manure for spring wheat, to apply next spring? A Constant Reader. *Copenhagen, N. Y.* [1. Lime is useful to most soils, but not on all—and this can be determined only by experiment. There *is* scarcely a doubt that it would benefit the muck. The great point is to have it spread finely and evenly; hence it should be reduced to powder—best by water slacking, and then spread evenly over the land. It may be scattered with a light scoop shovel from a wagon, taking care, (especially if water-slacked, instead of air-slacked,) that a gentle breeze blow constantly from the wagon, as it crosses the field with its side to the wind, to blow the lime away from the operator. A broadcast sowing machine, if it will sow copiously enough, may be better. Practical men differ as to the quantity per acre; much no doubt depends on the nature of the soil. Some think ten bushels enough at a time; others prefer a hundred—and in some cases several hundred have been applied. As its usefulness lasts several years, it is obvious that the time of year cannot be very essential.—2. Daisy seed can only be destroyed by a high degree of fermentation in the manure—which is only to be effected by forking over, shaking to pieces, and making into a heap. The fermentation must be checked before it goes too far, either by flooding with cold water or taking down the heap, or it will produce "fire fanging," and spoil the manure.—3. There is a great difference in muck—some is quite useful as manure, others less so—and besides, some soils (which possess little vegetable matter,) may be much more benefitted than others. It therefore requires experiment to settle the question of the benefit to be received. But as a general rule, unless the soil already contains much vegetable material, muck is useful, but not like common manure. An excellent way is to apply it to cattle yards, to work up and mix with the dung, or else to place it in thin alternate layers in compost heaps with manure. The drier it is when used in either way, the better]

Smut in Wheat.—In some of the back numbers of the Country Gentleman, I have noticed articles on smut in wheat, and the manner of preventing it by washing it with a compound of salt and water, and then drying with slacked lime, or a compound of blue vitriol and water, but so far as I know or can find by research in back numbers, the particulars are not given. Now will you please gratify an old subscriber and probably many other readers, by giving the particular mode of manipulating. How much salt shall be put in the water to make the brine? How long shall the wheat remain in it? Should it be washed in any other water before it is put in the brine? How long before it is sown, is it safe to prepare? If vitriol and water is used, how much vitriol and water per bushel, and the manner of applying it to the wheat? Also state whether these preparations or any other are perfectly effectual against the smut. F. A. Colman. [If smutty wheat is first washed in water, most of the smutty particles will be carried off. It may be done by stirring it in a tub with the water, and pouring off the liquid containing more or less of the smut. When the water appears to run clear, wet it with brine, which may be a saturated solution of common salt, or partly or nearly so. Dusting it then with air or water-slacked lime, (the latter is most efficacious,) serves to dry it as well as in some degree to destroy the smut. Seed wheat thus treated will produce little or no smut. It is perhaps hardly necessary to add blue vitirol, unless the seed is very foul—we are not aware that it is much more efficacious than salt. There are other remedies, which we have not tried. Our correspondents may perhaps give us additional information, if they have given them a fair, comparative and distinct trial.

Salt requires two and a half parts of water to dissolve it, making strong or saturated brine. Blue vitriol dissolves in about four parts of water.]

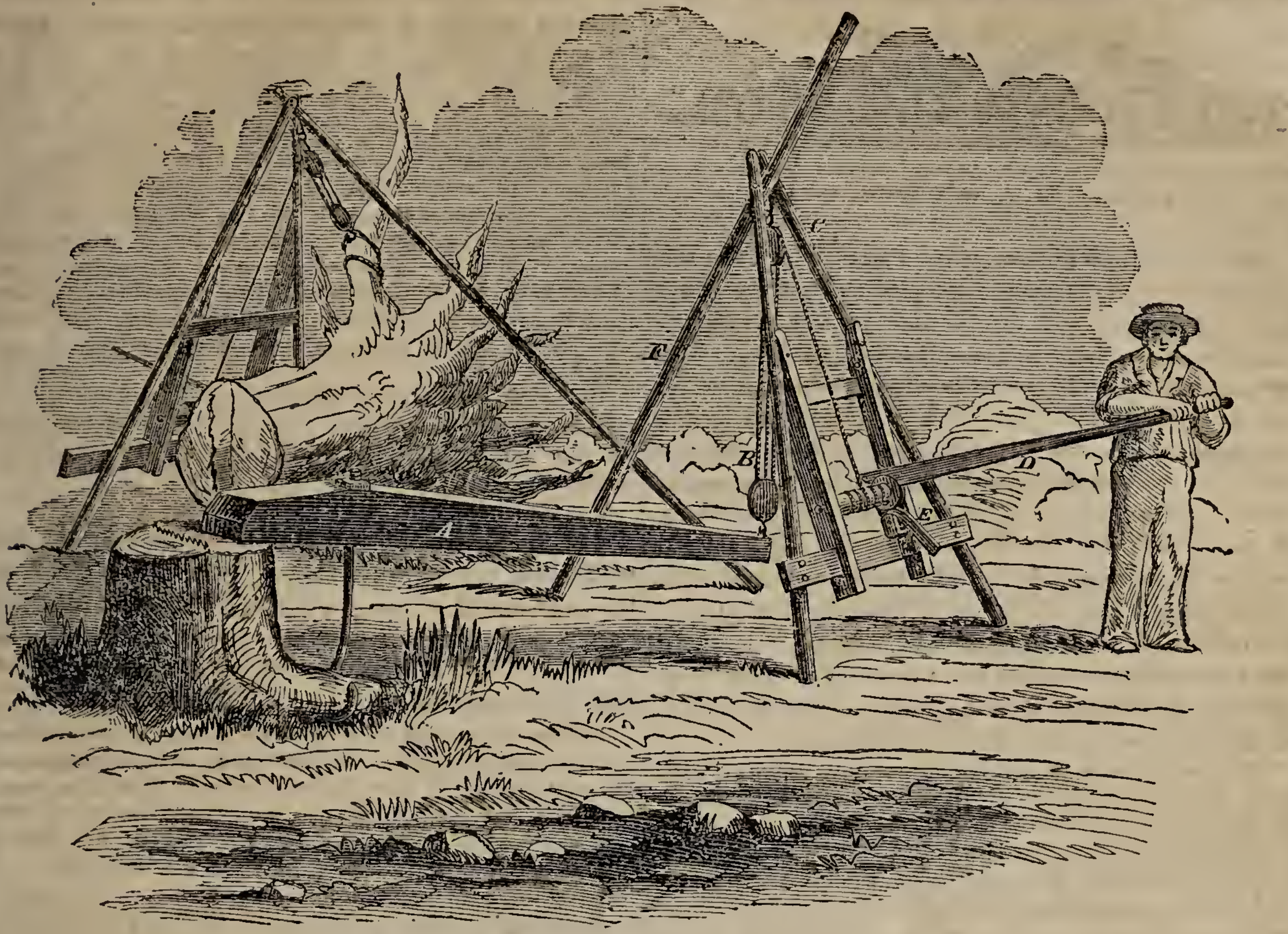
Bone Dust and Lime.—Will you or some of your correspondents please inform me at an early day, if bone dust and lime will succeed together, on seeding down; or does the lime neutralize the effect of the bone dust, as it is said to do in the case of guano, superphosphate of lime, &c? The ground we propose laying down is a clay bottom. A Young Farmer. [Lime can have no injurious effect on bone dust. The phosphoric acid is already neutralized, and the carbonate of lime, the state in which lime commonly exists in soils, can give it nothing more.]

Preserving Tender Bulbs.—Will you have the kindness to inform me through the next number of The Cultivator, how to preserve through winter such tender bulbs as Gladiolus floribundus, Mexican Tiger flower, Dahlias, &c.? Can they be kept safely in moist earth in the cellar? A Subscriber. [Take them up in autumn, clean them well, and pack them in a box of thoroughly dried sand; then place the box in a dry place entirely free from frost. A cellar is often too damp. A central closet, or any apartment kept warm by a furnace will answer. As every house almost is different in regard to temperature, dampness, &c., the experiment may not succeed so well at first as after a little experience. Keeping them in this way is not at all difficult, if they are properly managed.]

Sheltering Manure.—I want to know if it will pay to build a manure shed, provided you have a good yard? If it will, what way is the best, and how large should it be to hold all the winter manure made from 10 horses, 20 cows and 50 sheep? H. *Weston, N. J.* [The number of animals mentioned, of medium size, and with plenty of litter, &c., will make some 300 two-horse loads of manure, which would form a pile 30 feet square, and 7 or 8 feet high. The shed should be large enough to cover such a pile. It would be perhaps more convenient to make it 20 feet wide and 45 feet long. It may be of posts set in the ground, and covered with boards; if open on every side, it will be easier to draw the manure. There are three objects in sheltering manure—to prevent its becoming too wet and washing down; to avoid being too wet to draw; and to prevent the liquid parts from washing away and wasting. If all these points can be fully attained in open air, by using enough of dry material, keeping away surface water, and turning the water of the eaves in another direction, the shed will not be necessary—otherwise it will prove valuable.]

Foul in the Foot.—What is the matter with my stock, and what can I do for their relief? I have five cows and an ox, very lame with something I know nothing of. It first appeared like foul in the hoof, but soon got beyond the "foul limits," and showed that its seat was deeper in the foot. The foot gets very much swollen, and the leg is similarly affected as high as the knee, and the animal soon refuses to put the foot to the ground. After a week or ten days, it breaks and discharges in the cleft of the hoof, and forms a running sore, but the lameness still continues. What treatment would you recommend? J. W. *Mt. Kisco, Westchester Co., Aug.* 19. [This is probably a severe form of "foul-in-the-foot." Dr. Dadd remarks that "joint-murrain, quarter-evil, black-quarter, dry-gangrene, and foul-in-the-foot, are all analogous," requiring a similarity of treatment. Cleanliness and comfort will be the first thing to attend to In the above mentioned cases, we should recommend washing the parts with a solution of an ounce of fresh chloride of lime in a pint of water—or a weaker solution afterwards if this should seem harsh. A poultice of charcoal, Indian meal and slippery elm, would help to cleanse and heal. Linseed might be substituted for slippery elm. Or, pyroligneous acid might take the place of chloride of lime, but it would not probably be so good. Wash frequently, and keep every part clean. Dr. Dadd advises rubbing the joints with a mixture of equal parts of oil of cedar and fir balsam. Turpentine would be similar, but not so good.]

Heaves—Raspberries—Roses.—If it will not be asking too much, I should be glad to have you answer the following questions—1. How can a horse be cured of the heaves, easily and permanently?—2. What treatment ought black raspberry and blackberry briers to receive after the bearing season is over?—3. I have seen several rose-bushes this season that budded well, but just before they were ready to open, rotted without blossoming. Can you assign the cause, and a remedy? A. M. Pratt. *North Hamden, Del. Co., N. Y.* [1. It is a common, and perhaps correct opinion, that when the heaves become fully established, they are incurable. But they may be greatly relieved by always giving moistened food—moistening the cut hay the animal eats, ground meal, &c. Chopped cornstalks are good, if good and well cured. Especially avoid any kind of dusty hay. We have known a case where heaves were entirely cured by giving the horse for years dish-water, greasy water, sour milk, &c., for drink; and a few years since a correspondent stated he had cured his horse by giving him sour milk.—2. Cut out the old canes which have borne, and allow the new ones to have the space, to become stout and vigorous for another year's crop.—3. We could not state, without further knowledge of the symptoms—perhaps they were injured near the roots by winter, and



BROUGHTON'S STUMP-PULLER.

This machine is the invention of Albert Broughton, of Malone, Franklin Co., N. Y. It weighs about 400 lbs., and its cost is $75. It is described as follows:

The machine is formed of a massive beam or lever, A, Fig. 1, one end of which rests upon the stump, a stout chain being passed around the lever near this end and around one of the large roots, while the opposite end of the lever is drawn upward by a pulley, B. This pulley is suspended from the apex of a pair of shears, C, and is operated by a windlass which is turned by the lever, D, a pawl, E, holding the shaft from turning back. It will be seen that, as the end of the lever is raised, the stump is turned over, tearing out the roots upon one side, and either breaking those upon the other, or so loosening them, that the stump may be easily raised from its bed.

The lever A, is now laid aside, and the shears are moved directly over the stump, as shown in Fig. 2. The pulley being secured directly to one of the roots, by means of the powerful purchase furnished by the windlass and lever D, the stump is raised up into the air ready to be loaded into a wagon, or otherwise disposed of as may be desired.

In order to make room for the stump between the two leaves of the shears, one of them the stick, F, is made longer than usual, and provided with a second hole for the connecting pin, so that in the second position the shears may be widely spread, as shown in Fig. 2.

The apparatus may be easily moved about the field, from one stump to another, by three or four men; and for transportation any considerable distance, the broad portion of the shears may be laid upon the axletrees of a pair of wheels, and a horse harnessed between the timbers near the angle. Or the two side timbers may be supported on shoes, and the shears drawn along by a horse attached to the end.

For tearing up trees by the roots, a notch is cut in the side of the tree to admit the end of the lever, A, when one of the roots is chained to the lever, and the work proceeds as in pulling stumps; the weight of the tree top aiding in turning out the roots, and the end of the lever falling out of its notch as the tree goes over.

The peculiar merit of this stump-puller is the mode in which it operates, turning the stump over, and thus overcoming the resistance in the best possible manner.

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when the present supply of sap in the stems was exhausted, they perished. If so, the remedy would be dry soil and winter protection.]

Foul in the Foot.—Please tell J. W., (Co. Gent. Sept. 5,) that a few applications of a strong solution of sulphate of copper, (blue vitriol,) will entirely remove this disease.
"Mt. Holly Farm," N. Y. A. WALLING.

To Skillful Cheese Makers.—A farmer's wife wishes me to inquire how she can prevent her cheese from crumbling when it is cut, even if only a few weeks old—besides it is too sour. I see many directions how to make good butter, but the manufacture of cheese is too much overlooked—we want *time*, *temperature*, and *quantity* of different materials given—age of milk—age of curd when used—quantity of rennet to each 10 gallons of milk—how prepared—degree of pressure—and—every thing else. Young Farmer.

Concrete Fence Posts.—*D. P.* of New Concord, Ohio, wishes to know how to make fence posts of broken stone and mortar, in a mold; and whether this will answer a useful purpose. Can any of our readers give any practical information from experience?

Tumors on Hens.—I this spring purchased three Black Spanish hens, two of which have now a large fatty tumor on their breasts. Have any of your correspondents' hens been in a like manner affected? If so, to what cause do they attribute it? C. W. S. *Cold Spring Harbor, N. Y.*

Downy Aphis.—Can you or Dr. Fitch, give a mode for the easy destruction of the White or Downy Aphis? M.

Mildew on Linen.—Will any of your numerous friends, through the Co. Gent., inform me how to remove mildew from linen—also to remove grease stains from white marble. and oblige E.

To Drive away Rats.—To drive and keep rats from corn-cribs and granaries, place some gas-tar in them, and daub some in their holes, and they will leave the premises at once. The tar can be obtained at any place where gas is factured.

THE CULTIVATOR.

ALBANY, N. Y., OCTOBER, 1861.

☞ American Farmers, we need scarcely say, are this year particularly interested in the production of the wheat fields of Europe. From time to time we have noticed the prospects of the Crops in Great Britain and France; for we have felt that with our large surplus still unconsumed from the crop of 1860, and apparently large production the present season, much depends—as regards the prosperity both of Farmers and of the Country at large—upon our obtaining a sale for our breadstuffs in foreign markets. All the accounts we have heretofore given, foreshadowed less than an average yield in Great Britain, and are amply confirmed by a later and fuller estimate which appears in the London Agricultural Gazette of August 17th. That paper contains returns from more than *two hundred* judicious correspondents in every part of the United Kingdom, on which it remarks editorially, as follows:—

"The wheat crop of 1861 will certainly prove to yield below the average produce. This is a very serious conclusion to arrive at—but it is not possible for any reader of the reports we have received to avoid it. Our authorities, from four to six in every English county, are the most likely men in their respective localities to form an accurate estimate of prospects. All over the best districts of the island the present time is late enough to justify the formation of a confident opinion; and upon the whole it will be found that the opinions given are against the probability not only of a first-class harvest, but as regards all autumn sown grain and all stiff clay soils, of a merely average yield. Now, autumn sown grain and stiff clay soils are wheat and wheat soils respectively; and accordingly it will be seen that on the whole the returns of opinion as to the wheat crop are unfavorable. Not, of course, so unfavorable as those of last year, but still so far as the wheat crop is concerned, *promising nothing whatever to remedy the past most disastrous season which English agriculturists have known.* Spring corn, however, is generally good. Barley and oats, especially the latter, may be expected to yield unusually well. Beans are blighted, and they are also thinly planted, owing to the use of inferior seed. Peas are generally very good. Potatoes are almost universally attacked with the disease; which is this year unusually early in its appearance, and threatens to be unusually mischievous in its effect. Hay has been, in all late districts, "got" with much difficulty; and a fair crop is damaged to the extent of at least one-half. Turnips and other green crops are generally very promising; but mangel wurzels and carrots are not half planted, owing to failure of seed. On the whole we have on all turnip and barley soils the probability of a good season—while the prospects of wheat and bean growers, and of clay land farmers generally, are unfavorable."

For five years the Agricultural Gazette has taken the same means to arrive at a fair estimate of the crops; and we copy below its figures with regard to wheat for each season since 1857, from which it may be seen how 1861 compares with preceding seasons:—

	Year.	Total Returns.	Over Average.	Average.	Under Average.
WHEAT,	1857,	137	74	50	13
	1858,	201	101	92	8
	1859,	186	20	120	46
	1860,	140	1	46	93
	1861,	204	14	76	114

— We have also before us the Paris Journal of Practical Agriculture of Aug. 20th, containing a full review of the condition and prospects of the crops in France during July and the first 15 days of August. M. BARRAL briefly sums up as follows:—

"*En resume* the year 1861 may be considered as *very mediocre* as regards the production of wheat. Quite fortunately Indian corn, barley and oats will furnish a passable return. Potatoes are attacked with the disease, but they will nevertheless probably give such a crop as to reward the cultivator for his pains. Beets appear to be doing pretty well; the same is true of the *industrial crops* except hops which have generally been devoured by insects. The second crops of forage will partly make up the deficit of the haying. As to the vine, it will without doubt, yield a good crop, except where the spring frosts, which were too numerous this year, affected it, or the fruit has suffered too much from dropping off. In fine, Agriculture has to record a mediocre year upon its annals."

There can, therefore, be no doubt that both Great Britain and France will continue to buy our breadstuffs, although we may not buy very large quantities of their manufactures.

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☞ The distinguished chemist BOUSSINGAULT has just read before the French Academy of Sciences, a paper on the employment of Lime in Agriculture. It has not yet been published, but M. BARRAL gives the following as the substance of it, which we translate for the Co. GENT. from the *Journal d'Agriculture Pratique* for Aug. 5:—

"Lime introduced in an arable soil very quickly sets at liberty a certain quantity of azote in the state of ammonia; the azote elements were before united in insoluble combinations, not assimilable by plants—the action of the lime sets them free, and permits a part of the capital buried in the soil to be utilized for the next crop. If this was the whole effect of lime, of which the experiments of Boussingault afforded evidence, small doses of it at once, ought to be counselled, because the quantity of ammonia produced does not increase in proportion to the quantity of lime used. But as heavy limings produce incontestible effects in certain cases, it must consequently be admitted that lime exerts an action of some other kind upon the elements of the mould. Boussingault thinks that certain mineral matters, such as potash and silica, may be liberated in the soil by the lime; that other substances injurious to plants, are destroyed or modified by the same agent, and that to these effects is added moreover a physical action, changing the constitution of the land. The action of lime is thus excessively complex, and its good effects can only be explained by studying attentively the special circumstances under which they are produced. The grand fact proven by the present researches of this agricultural *savan*, is that there exist in mould, as well in the form of organic matters as in that of mineral matters, a host of substances completely inert for vegetation, until the moment when some proper agent renders them assimilable by plants. The continuance of experiments upon the method devised by Boussingault, can alone clear up these excessively complex facts, and point out to our agriculture the most effective processes. The discovery of methods which conduct to truth is often the greatest service that can be rendered to Science and to Art."

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TENNESSEE MAY WHEAT.—This is a very early variety, and remarkable for withstanding the destructive effects of winter. H. FELLOWS of Sennett, Cayuga Co., regards it as nearly equal in quality to the Soule; he showed us a piece, standing on an exposed hill, next to a field of Mediterranean. The latter was almost wholly destroyed; the May but slightly injured. We have observed similar results in some other instances. It contained no midge. JOHN R. PAGE, in the same neighborhood, has also cultivated it, but does not think it any better than the Mediterranean, if as good. It may be worthy of further experiment, however, for if as good as the Mediterranean in other respects, and decidedly hardier, it would be an acquisition. It will be observed that the past winter was a very unusual one, placing the hardier varieties in a more favorable light than might again occur for a dozen years. Among the many new sorts of high promise, there are evry few that withstand the test of years.

Editorial Jottings.—*Watertown, Saturday* p. m., *Sept.* 14.—With many memoranda collected during the past four days' journeyings, I find myself restricted by the early departure of the mails to a brief and very hurried notice of the several Exhibitions I have attended—much less full than I should like to have made it and much less so than the merits of these exhibitions really demand.

Tuesday night I passed at Rome, chiefly in listening to the music of a very heavy rain,--which, however pleasant and harmonious on some other occasions, is not generally considered particularly advantageous either by managers or visitors at our Agricultural Fairs, as an overture or accompaniment thereto. Wednesday morning, drenched by the same rain, I seated myself in the Watertown train, on the way to Mexico, where the Show of the Oswego Co. Society continues to be held, under the presidency this year of Alvin Lawrence, Esq. Mexico must be a pleasant and active village on a bright day. By the time we reached there, by stage from the Richland station, the rain had transformed itself into a mist, until finally about noon it nearly ceased to fall. The committees and officers availed themselves of the change to resume the examination of the stock, a part of which had left the ground I was told, on account of the storm. The attendance was certainly much better than I should have anticipated under so discouraging circumstances, and during the address we had occasional glimpses of a pale sunshine, reverting just as it concluded into the gloomy shower which I had begun to think a part of the established order of things for the whole week.

The show of stock was a very good one, including both Devons and Short-Horns in considerable numbers, grades, working oxen, fat cattle, sheep and swine. One of its most striking features was the string of 18 fat cattle shown by A. W. Severance, Esq. of New Haven, which were as fine a lot as is often found on any one man's farm—12 of them, as I was told averaging 2,000 pounds weight each, and one touching 2,500. There was a fair show of implements, among which I noticed one of Remington's Steel Plows, made at Ilion, and shown by Mr. Hiram Walker of Union Square, who has tested it to his great satisfaction, as he said, and whose neat farmstead and orchard which I had noticed in passing them in the morning, bore witness that his commendation was well worth having. In other respects I believe the show was quite a good one, but the weather must have had a somewhat damaging influence upon its pecuniary success, unless the third day turned out better than it appeared to promise.

The following morning I came on to Adams, reaching there in time to spend an hour or two on the fine eighteen-acre field belonging to the flourishing Society of this and the adjoining Towns, before the commencement of the Address, which was delivered by Hon. Edward Everett of Boston. The skies had grown brighter during the forenoon, and it cleared off pleasantly about the middle of the day to the great delight of those who wished to listen to the orator of the day. Mr. Everett's address was eloquent, lucid, truthful and instructive, as he always is; his audience, numbering several thousands—although not nearly so numerous as it would have been if the morning had opened fine and clear—listened with unbroken attention for more than an hour, and when he sat down gave hearty cheers for the Union and the speaker. I have no time to attempt a summary of his remarks, which were both appropriate for the place and occasion, and well-timed in view of the present condition of public feeling. The exhibition of stock on the grounds, was very good indeed; the Ayrshires of Gen. Hungerford constituting one of its most excellent features, while the swine are also worthy of prominent mention,—not to speak of the Devons, Short-Horns, and other classes of cattle, together with the horses, all of which were out in large force.

On the train I had been so fortunate as to meet with our friend Hon. C. T. Hulburd of St. Lawrence, who persuaded me to accompany him, Friday, to the Franklin County Fair at Malone—from which I have only just returned in season to write this letter. The exhibition had been in reality brought to its conclusion before our arrival there at 3 p. m. of the last day—except as regards horses, the trial of which had then drawn a very large attendance to the Society's well arranged course. The track was in good order for trotting, and this exercise was evidently conducted to the immense gratification of the crowds of spectators occupying the seats and thronging the enclosure. The weather of the preceding days, I was glad to see, could have done little if any damage to the Society's exchequer. Malone is a very thriving place, and like Adams, many of its avenues are beautifully shaded and highly improved. To A. Lindsey, Esq., the President of the Society, and other citizens, I was indebted for a kind greeting and many attentions.

— But my time is nearly expended. I find the country looking still very fresh, and the herbage and trees generally in full verdure. The hay crop this year has been an unusually large one; oats have also yielded well; corn is lighter, and still somewhat in danger of frost; spring wheat has been less successful, perhaps, than other grains, many fields of it being yet out—some not yet cut. Mr. Hulburd thought that with him the Grain Aphis had injured this crop to the extent of one-third; it has been very numerous through all the Northern part of the State. There are many potato fields that bear the appearance of the rot.

☞ Without being quite disposed to urge that it is a matter of absolute impossibility, either for audible "knockings" to break the stillness of the air, totally without the aid of man or matter,—or, for "ghosts," arrayed in garments of white, to trail their hoop-less skirts athwart the vision of lonely pedestrians in sepulchral neighborhoods,—or, for one kind of grain to grow up from another kind of seed—a good wheat field, for example, some frosty morning to be found all "changed to chess," or one species of grass to be irrigated or manured into another species;—we may yet aver with safety, that there is an odor of suspicion which to our nostrils is always strongly perceptible in any narrative purporting to describe the actual occurrence of the various abnormal phenomena just referred to. And we have generally discovered, where investigation was practicable, that this suspicion was well grounded, and that either error or imposture were somewhere at the root of the whole matter.

Another instance, illustrating how easily even a scientific man may be mistaken, has just come to our notice. Last year the Gardener's Chronicle, which seems disposed to be more credulous in some respects, than would be anticipated from the reputation of its accomplished editor, drew attention to a case of "transmutation" supposed to have been successfully accomplished in the cultivation of Grasses by Prof. Buckman. Prof. B., himself, appears to have had no doubt whatever upon the subject; "he believed that he had proved that in the course of cultivation *Poa aquatica* and *Glyceria fluitans*, two widely different species, *lost their distinctions and became identical;* that the same thing happened between the Fescues called *loliacea* and *pratensis;* and that the wild Parsnip had become ennobled under his hands in the same way as the wild Carrot was formerly under the management of the elder Vilmorin."

Prof. Decaisne of the Paris *Jardin des Plantes*, celebrated not less as a botanist than as a cautious and indefatigable experimentalist, at once requested specimens in corroboration of such remarkable results. He has now reported upon these specimens—proving most conclusively, that in this instance at least, "*transmutation*" *never occurred.* Prof. D., after narrating an experiment of his own with the real *Glyceria*, which was also an entire failure as far as producing transmutation is concerned, says:—

"The curious circumstance attending the account of transmutation related by Mr. Buckman, is that it rests *upon a palpable mistake.* The two specimens he was so good as to send me, in neither case belong to the genus

Glyceria, but are in both instances *Poa sudetica!* This brings down the whole scaffolding with which his theory was constructed.

"If, however, Mr. Buckman has fallen into an error about Poa, I believe that others have done the same in the case of Carrots. That is to say, for four years past I have placed myself in the same conditions as were described by M. Vilmorin, and nothing has come to pass. *Wild Carrots remain wild Carrots still.* I cannot but believe that when M. Vilmorin saw them changing to red, yellow, and purple, such changes must have been brought about by accidental crossing. Insects must have conveyed the pollen of cultivated Carrots to the wild ones, and thus intermediate conditions have been obtained."

Selecting Seed Corn, &c.—Farmers must not now forget that all plants or crops raised yearly from seed, are liable to deteriorate from any uncommonly good sort. In this respect they are very different from potatoes, which are increased by the division of the individual sort, new varieties being only produced from seed balls. Select constantly, or every year, the finest ears, from the most productive stalks of corn—and if this does not constantly improve the sort, it will be because it has been already run up to a high point. A little attention may thus make a difference of hundreds of bushels in the course of a few years, in the aggregate of a large farmer's crops. The same effect may result from a selection of seed wheat—but as the heads and grains of wheat are much smaller, and the process consequently slower than with corn, the selection is best made by such a machine as Nutting's fan, or other screen which will separate only the largest grains. Cutting wheat early, this process will of course give only the earliest as largest, and thus the early maturity may be increased, and the midge escaped. In selecting all kinds of seeds, pick out the best.

Trees for the Prairies.—There is no doubt that the crops of the prairies would be materially increased by planting lines and belts of trees, to prevent the violent sweep of the winds. Experiments in this state have clearly proved this point, in relation to the profits of shelter. A correspondent of the Prairie Farmer says:—"I believe in a law to compel every man who owns a farm to set out a certain number of trees every year. Such an enactment duly enforced, would soon give our bleak looking prairies a cheerful appearance. A walnut grove can soon be started from the walnuts. Oak, hickory and maple can be procured and planted at a trifling expense, yet they will soon add greatly to the beauty and value of the farm."

The Horticulturist.—Mr. P. B. Mead, who has been its editor for some years past, and Mr. Geo. E. Woodward, have become the proprietors of The Horticulturist, under whose joint charge it will hereafter be conducted, Mr. Saxton, the late proprietor acting as their publisher. Mr. Woodward, who is well known as a contributor to the Country Gentleman, is a graceful and ready writer, thoroughly versed in all the branches of Rural Art, and will prove a valuable acquisition to the editorial staff. We wish the new firm the success we are sure they will deserve.

A New Species of Rye.—A new species of rye, indigenous to California, and remarkable for the largeness and beauty of its grain, has been exhibited in Washington. Mr. Isaac Newton, the newly appointed Superintendent of the Agricultural Bureau, connected with the Department of the Interior, has received a small supply of the grain, and will distribute it among the farmers in different parts of the country. Its yield is said to be very great, reaching even, on poor land, fifty bushels to the acre.

The above paragraph is going the rounds of the papers. Those who read the communication of Hon. Levi Bartlett, on p. 319 of this no. of the Cultivator, on this "New and Wonderful Rye," will not be in a hurry to invest largely in it. Instead of being "indigenous to California," it was imported and distributed by the Patent Office, under the name of "Giant Rye," two years ago.

☞ An Agricultural Library, comprising 120 volumes, has been established at Great Barrington, under the auspices of the Housatonic Agricultural Society.

☞ Why should not the New-England States raise Wheat enough for their own consumption? This is a question, the answer to which will depend something upon its pecuniary expediency, as well as upon the fertility of their soils. In the latter point of view—so far as the natural productiveness of the land is concerned—we no more doubt the ability of farmers there to supply their home demand for breadstuffs now, than before the broad West was turned up by the plow-share. In a valuable communication on pages 306 and 307, our friend Hon. Levi Bartlett, plainly shows that in one respect the climate of the Granite State is better suited to Winter grain than that of a latitude considerably farther South; wheats that have frozen out from the severity of the frosts in Ohio, Kentucky and Maryland, have come out in the spring uninjured in New-Hampshire, owing to the thick covering of snow with which in that region they were constantly protected. And, as regards the money view of the question, Mr. B. shows that the best Flour sold in his neighborhood, after paying the freights to which it has been subjected, and the profits accruing to the different parties through whose hands it has passed, costs him, even in these times, not less than $9 per barrel, a price which makes wheat of his own growing—which is also of the best quality, as we can personally testify—worth to him $2.25 per bushel. Mr. Bartlett's experiments in wheat growing have done much to convince the Farmers of New-England that there is no necessity of their being dependant upon the West for their flour; and in this respect, as well as for many serviceable hints to all wheat-growers, his present letter is worthy of careful perusal. The samples of wheat with which it was accompanied, bear out all he says of their excellence; they are very neatly put up, and we shall deposit them in the Museum of our State Agricultural Society. Mr. B. desires us to say how they compare with the wheats we have seen this season in Chester county, Pa., or elsewhere; our visit there was while the grain was still green, and we have not as yet been furnished with samples from other localities of the present year's growth. The straw, we should add, of Mr. Bartlett's specimens, varies from about three to five feet in length.

Ag. Division of the Patent Office.—Isaac Newton of Delaware County, Pa., has been appointed chief clerk of the Agricultural Division of the Patent Office. "We have known Mr. Newton," says the *Germantown Telegraph*, "for a quarter of a century; are well acquainted with his qualifications as a Pennsylvania farmer, and fully testify to his practical knowledge in the pursuit to which he was reared, and which he has continued to follow all his life. He possesses also enterprise, energy and industry, hence pre-eminently a "practical farmer." His farm in Delaware county, which we visited some years ago, was in all respects a model. His system of culture—his crops, as the result of this system—his stock—his barn and outbuildings, and their appurtenances—the implements in use, as well as the general arrangement of all things connected with the prosecution of the business—convinced us at the time, some ten or twelve years ago, of just what we said in our columns then about it—that it was one of the best farms we had yet seen; and, we will now add, or that we have seen up to this date."

South-Downs Received.—*Extract of a letter under date of Holmdel, N. J., from* Mr. J. C. Taylor:—"I am glad to be enabled to inform you of the safe arrival of my three rams and four ewes (from Mr. Webb's sale,) by Kangaroo in the best of condition. You would not know they had been on a ship only by the smutty color. I was at a loss to know why "89" should sell for $700 more than the next best, among so many extra rams, but on seeing him, I wonder no more; I never had seen nor did I expect to see a sheep, that I could not find some fault with, but 89 is past my criticism. The next highest ram, 86, called "Parkranger" is a son of "Reserve," the ram I procured of Mr. Webb last fall, as the best aged ram he had, and one that he used three years before he would put any price on him. The No. 22 (4 years old,) sold for 100 guineas—more than double any other old ram,—was a son of "World's Prize," the ram I used two years on my flock, and from which ram I have a splendid lot of ewes."

"Freak of Nature."—I send you a small branch of a potato stalk, bearing small potatoes in the axilla of the leaf on both sides of the stalk. It is from the seed of the Early Blue (as called in Potsdam,) planted last May. I have never seen potatoes grow on the stalk above ground before, and therefore think it a curiosty. Please say in the Country Gentleman what you think of it.

G. F. COLE, M. D.

The common "root" or tuber of the potato is regarded by botanists, as only a subterranean fleshy stem, the eyes being the buds, from which new plants grow. A new variety from seed, on which these tubers grow without being covered with earth, may be regarded as a simple "freak of nature," differing in no essential respect from any other potato, physiologically speaking. The tubers are about half an inch in diameter, and have eyes like other potatoes.

Hoeing Corn as it Ripens.—Recently in riding past an excellent field of corn, just after the owner had finished his haying and harvesting, we observed his men busily engaged in clearly out the half-grown weeds (the few that could be found) among the rows. As one weed will produce a thousand, this was doubtless an economical operation. If the seeds of weeds were completely eradicated from the soil, the labor of hoeing corn, potatoes, and root crops generally, would be almost nothing. Let the labor be all applied in horse-cultivation, and it would produce excellent results. We recently examined a fine corn-field that had been thus cultivated six times. Throwing the necessity of destroying weeds out of the question, one cultivating is worth half a dozen hoeings to the crop, and costs far less.

☞ "May not writers often mean *different things?*" queries a Maryland correspondent: "there is a good deal of difference of opinion for instance, about the value of Cornstalks—a *cornstalk in our language* I know is never eaten, while the *tops and blades* are excellent fodder. Thus what may be true under one latitude, is not so under another."

Three Per Cent. Kills the Farmer.—We regret to notice many cases where a little time since an industrious farmer had a large farm, a good and happy homestead, now all gone. We ask where? Echo says, gone in *three per cent. a month interest*, which is sure to bring the homestead *under a mortgage;* and when once in the grasp of a close money-lender, it seldom happens that the mortgage is lifted. Three per cent. a month has got the homestead, and it seldom happens that it is ever redeemed. Thus says the California Farmer. Many farmers on this side the Rocky Mountains have learnt, from dear-bought experience, the same lesson. The cases must be rare, where a farmer can afford to pay over the legal rate.

Peaches.—The fruit culturists of Southwestern Ohio and Central Indiana, must have a fine time, so far as the enjoyment of a good crop of Peaches is concerned. We are indebted to Prof. T. H. Burgess of Friends' Academy, Union Springs, for some excellent specimens, fully ripened, which he brought in an excellent state of preservation from Western Ohio, the crop in our own region being entirely destroyed.

Large Farms in California.—A California correspondent of the American Stock Journal, gives an account of several of the large farms in Los Angelos County—among them that of Don Abel Stearns, who owns twelve ranches, which comprise 230,815 acres, upon which he has 18,000 head of cattle, and 3000 horses. Forty-three others are mentioned in the same county, who own farms ranging from 4,000 to 60,000 acres.

[For the Country Gentleman and Cultivator.]

THE BLACK BLISTERING FLY.

Messrs. Tucker—The insect from L. W. Puffer of North Bridgewater, Mass., eating his Asters, is the Black blistering-fly, *Cantharis Pennsylvanica* of De Geer, (*C. atrata* of Fabricius,) heretofore noticed in the Country Gentleman, August, 1857. It is a cylindrical beetle, about half an inch long and wholly black, without any stripes or spots. It is often seen during the autumn, on our wild Asters and on the golden rod.

To destroy them, pick them off, drop them to the ground, and scrape the sole of your boot over them. That is what I should do if they came on my flowers.

Salem, N. Y., Sept. 6, 1861. ASA FITCH.

[For the Country Gentleman and Cultivator.]

COST OF CUTTING HAY.

Eds. Co. Gent.—Noticing a controversy in your paper in regard to the cost of cutting grass, &c., with machine, I send you the enclosed, which I cut from one of our State papers. W. D. W. *Desmoines, Iowa.*

Mr. Editor—Fancying that my hay cutting the present year was rather cheaply done, I transmit you a few figures, thinking they may not be wholly uninteresting to your farmer readers.

My crop was sixteen acres. Six acres manured, very heavy timothy and clover—the present, the third crop—moist land, 20 loads. Ten acres same quality land, unmanured—the present, the first crop, 20 loads. Total 40 loads—estimated fully 32 tons. Amount of labor expended as follows:

Mowing with machine, ... 1½ days.
Raking with horse rake,.................................. ¾ do.
Putting up and stacking, ... 9¼ do.

Total amount of work,........................ 11½ days.

Cost for mowing and raking, 60 cents per acre.......... .... $9.60
For putting up and stacking, 9¼ days, at 75 cents per day,...... 6.94

Total cost (exclusive of team work,)................ $16.54

Or, for hay in stack, 59 11-16 cents per ton, or $1.03 6-16 per acre.

Perhaps it may astonish some of our eastern readers, but such are the figures.

St. Charles City, Iowa, July 22, 1861. R. W. H.

HOW TO MANAGE BONES.

A correspondent of the *Journal of Agriculture* gives the following as his experience, every other year, for the past ten years; that being as often as he could collect bones enough to fill a tub:

With a sledge hammer break the bones into pieces of one, two or three inches; take a hogshead tub, put in two or three inches of hard wood ashes, the same depth of bones; then ashes and bones until full; pound or press solid as convenient; fill with water or urine, all that it will absorb. If done in the spring or summer, by the next spring it will shovel out fully decomposed, the bones being as soft as chalk.

Then add all your hen manure, shovel and rake it over once a week, for three or four weeks before planting time; by that time it will be finely powdered. Put about equal to a handful of compost into a hill, for corn, potatoes, squashes, melons, &c., when it will be found to forward the crops to a wonderful degree.

☞ Our long-time friend and well known correspondent, C. N. Bement, Esq., we regret to hear, has been compelled by his continued ill health, to retire from Springside. Correspondents may hereafter address him at No. 66 East 29th street, New-York.

The Corn Crop of Illinois.—*Extract of a letter from* M. L. Dunlap, Esq., *under date of Champaign, Aug.* 26:—"Crops here are good on the average, but the corn crop is in a critical condition; an early frost would lessen it more than one-half."

RENSSELAER COUNTY FAIR.

☞ We visited the Show Grounds of the Rensselaer County Ag. Society, during their Fair last week. These Grounds are located between two and three miles from Troy, just below the village of Lansingburgh; they comprise eleven or twelve acres of land, conveniently situated, and well adapted for the purpose, purchased by the Society after the loss by fire of their former buildings north of the present location. The erections—aside from the offices at the entrance—are three in number, each 100 feet in length, by 45 wide, with an upper story, lighted from above, of the same length as that below, and 20 or 25 feet wide. One of these, the first which the visitor enters, is occupied below as "Mechanic's Hall," while above are committee rooms, and a convenient apartment for dairy products or other uses. The other two, which stand in a line beyond the first, are—the one upon the right, Manufacturer's Hall below, with an Art Gallery, etc., above—the one on the left, Horticultural and Floral Hall below, with the Ladies' department above. The fences on the sides of the grounds are lined with covered with pens for the Sheep and Swine, and stalls for the Cattle and Horses; and beyond these, and the buildings, is a well made track for the exhibition of Horses, which circles around a higher portion of ground within, so as to afford even better accommodation to spectators than if perfectly flat. This arrangement is throughout very commodious, while the buildings afford ample room for a large and varied display. Water is brought in from the hill back of the grounds, affording an ornamental fountain, as well as drinking cups for visitors, and a plentiful supply for the stock, while, along the farther limit of the field, there is quite a stream running across it, which is used for the trial of fire-engines.

Owing to the unusually early period of holding this year's exhibition, it was not as full and complete as that of a year ago, as we were informed by George Vail, Esq.,—to whom, together with President Osgood, we owe our acknowledgements for a cordial greeting and kind attentions. But the attendance was very gratifying indeed; the fields near by were filled with the teams of farmers from far and near, and the new horse railroad connecting Troy and Lansingburgh, was taxed far beyond its present capacity of carrying passengers. Among the stock were eleven head of Mr. Vail's Devons, including a yoke of young steers, and five head of Short-Horns including the bull Mayduke, and four cows, Bellflower 3d, 4th, 5th and 6th, a family of which Mr. V. has a high opinion as milkers as well as otherwise. The Short-Horn bull Neptune was shown by D. T. Vail, Esq., now 2 years old, and possessing many meritorious points. Mr. Geo. Vail also showed South-Downs; and there were was a fair representation of other sheep of various grades and of swine, together with a considerable show of poultry, of which last Mr. Stephen Fowler was a large exhibitor. Of Fruit the exhibition was better than might have been anticipated, including a list of 50 sorts of pears, and hot house grapes from Mr. D. T. Vail; but there was no other part of the show so full and beautiful as the turn out of flowers. Our friend Dr. Newcomb occupied alone about 250 feet of shelving with a very extensive assortment, and Mrs. Van Namee and several others were large exhibitors. There was a fair display of Vegetables. The apartment devoted to Ladies' work was most handsomely filled, and included an unusual feature in the presence of several of the old-fashioned spinning and flax wheels, in operation under the management of farmers' wives, a part of whose education it had been, as much as the working of a sewing machine is beginning to be a part of household operations now. There were many interesting features in the exhibition of implements, machinery and miscellaneous goods, to which we shall not have space to refer. Troy is a place of quite extensive manufactures, all of which bear an excellent reputation for quality and workmanship, from the Mathematical Instruments of Gurley to the Scale Works of Sampson & Tibbits, from the Woolen fabrics of the Troy Hosiery Co., to the Cordage works of Adams at Lansingburgh. In the Art Gallery we noticed a miniature on ivory, exhibited by Mr. D. W. C. Deforest of De Freestville, and beautifully executed by Miss Louise Wagner.

— Mr. Vail's farm of over one hundred acres adjoins the Society's Grounds upon the north, his summer residence occupying a beautiful location in a charming grove, and the out-buildings near by affording convenient accommodation for the improved stock to which he has so long given more or less of his attention. Upon the flat near by, which has produced some premium crops of Indian Corn, that grain is this year looking remarkably well;—it is of the Dutton variety, from seed obtained by Mr. V. from the late Judge Buel nearly 25 years ago, and grown by him on this farm ever since. It would have done to cut last week, so nearly were the fine ears already to maturity.

◆

DOCTORING HORSES, &c.

Messrs. Editors—I should be glad if I could, through the medium of your journal, obtain information as to the value of some of the books I see advertised. 1. Is there any sound work upon "botanic medicine" that a person can procure, from which he can learn the practice, and where can it be procured? 2. Are not Dr. G. H. Dadd's veterinary works and practice upon the botanic principle? While at this point I must say I have been utterly disgusted at the treatment I have seen animals receive, being drenched with all sorts of nauseous things, simply because *some one or other said it was good.* Some of the works I have seen distributed about, such as "The Pocket Farrier," and such other small works *published to sell*, are sadly mischievous; the recipes they contain generally *overrate the doses* that are suitable for animals, and frequently combine a lot of trash that is far more suitable for the manure heap than for an animal's stomach. I am not a "thorough-bred" V. S., but I have paid a sufficient attention to the subject to know that much, and I trust to learn more yet. My belief is that there is a safer and milder way of healing animal diseases than by the severe treatment generally advocated. I do not mean to disparage the abilities of educated men in the least; they perform their duties admirably according to the *system they profess* and have *thoroughly studied.* But I believe there is a *milder* way than to use the drugs generally used in their practice. This milder practice I am anxious to learn more of. Rusticus. *Fairfield, C. E.*

We know of no work specially devoted to "botanic medicine" that we could recommend, nor could we commend such practice exclusively. For example, there is no medicine so universally safe for all diseases of the digestive system in animals (and in fact in men too) as good, fresh, finely pulverized *charcoal*, moistened to a paste with water; but this is not a botanic remedy. Dr. Dadd's excellent works go largely, but not exclusively, for vegetable remedies; and his mild, cautious treatment would be entirely in accordance with the views of our correspondent. It is a safe general rule, that unless the owner of a sick animal knows what is the matter, and also just what to do, to give nothing; but attend to every thing that appears to alleviate suffering, or in other words attend to *good nursing.* More animals have been doctored out of existence by the old fashioned dosing and purging, cut and slashing, kill or cure system, than from a want of medicine.

◆

[For the Country Gentleman and Cultivator.]

To Prevent Horses from Kicking or Pawing in the Stall.

Hitch a trace chain around the ankle or fetlock of the foot most used, and let the other end of the chain lay loose on the floor of the stall, and all will be right.

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The farm owned and occupied by the subscriber, situated one and a half miles west of the village of Amsterdam, and containing 138 acres of land, 20 acres being in wood, and the balance under a good state of cultivation. Said farm is beautifully located, and commands a view of the Mohawk River and Valley, Erie Canal, and New-York Central Railroad, that cannot be surpassed. The soil is a gravelly loam, and well adapted to all kinds of grain or grazing; the fences are good, (mostly stone,) and so arranged that stock has free access to water at all times. The orchard and garden contains a large variety of choice grafted fruit, consisting of Apples, Pears, Plums, Cherries, Currants, Gooseberries, Strawberries, Grapes, &c. The buildings are nearly new, the house and principal barn having been built within the last ten years. The house is stone and built expressly for a CONVENIENT, COMFORTABLE FARM HOUSE; the main barn is 64 by 32 feet, with 20 foot posts, and basement 10 feet high; it has other barns and sheds adjoining, sufficient to accommodate a large stock. There is also on the premises a small tenant house, nearly new and in good repair. The above farm will be sold on liberal terms, and possession given the first of April next; or if purchaser desires, can buy stock, farming utensils, &c., and have possession immediately. For further particulars inquire on the premises or by mail, of

JOHN M. VANDEVEER,
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June 27—w&mtf.

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June 6—w13tm3t.

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Fifteen Months in a Year!

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Remember then, if you please, that the Cultivator for 1862 may be had in Clubs of Eight at Thirty-Seven and a Half Cents per Copy; and the Cultivator and Register in Clubs of Ten at Fifty Cents per copy for both; and that all new Subscribers received during the coming three months will receive one, two, or three extra papers!

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LUTHER TUCKER & SON,
October 1, 1861. Albany, N. Y.

THE CULTIVATOR.

THIRD] TO IMPROVE THE SOIL AND THE MIND. [SERIES.

VOL. IX. ALBANY, N. Y., NOVEMBER, 1861. No. 11.

PUBLISHED BY LUTHER TUCKER & SON,
EDITORS AND PROPRIETORS, 395 BROADWAY, ALBANY, N. Y.

J. J. THOMAS, ASSOCIATE EDITOR, UNION SPRINGS, N. Y.

TERMS—FIFTY CENTS A YEAR.—Ten copies of the CULTIVATOR and Ten of the ANNUAL REGISTER OF RURAL AFFAIRS, with one of each free to the Agent, Five Dollars.

Editorial Correspondence.

Sketches of Cayuga County Farming—V.

The County, as I have already remarked, consists of two distinct regions—the southern being of great uniformity, and possessing a strong fertile loam. The northern part, (or nearly all that part lying north of Auburn,) is broken into ridges running north and south, and consisting of lighter soil, or mostly of a sandy or gravelly loam.* Nearly all the southern part needs underdraining—only a part of the northern requires it, much of the subsoil being gravelly, so that post holes and cellars do not hold water, and cellars need no drainage. There are, however, considerable portions where the water remains in the subsoil, and underdraining becomes necessary for success. More expenditure is required for the complete improvement of the southern soil, but when this is effected, it is the most valuable, as it retains manure much longer, and may be brought up to a higher degree of fertility. Much of the northern part possessing natural drainage, that region generally has proved the more profitable for ordinary farming, before underdraining was adopted. A decided difference is observed between these two kinds of soil, where stone are used for forming the channel. Clayey soil soon forms a solid adhesive mass over the stones, and is comparatively little liable to fall in; the lighter kind easily crumbles or runs, and unless the top is covered with small stones, coarse gravel or small flat stones, the ditch soon becomes useless. Digging three or more feet deep, and filling but a short way up, tends to prevent the earth from sinking among the stones.

I have been unable to visit but few farmers in the northern part of the county, but the few met with have imparted much practical information, which will doubtless prove valuable to many of the readers of this paper.

JOSEPH L. TAYLOR of Mentz, occupies a 100 acre farm, while another of similar size, partly unimproved, a mile distant, is used for pasturage. He has given much attention to rotation of crops. His course is the usual one of corn on sod, plowed just before planting; barley, spring wheat or peas; then winter wheat, seeded down with clover and a small portion of timothy, which remains two years. He prefers the pea crop to all others, to precede wheat—thinks it nearly equal to summer fallow; it loosens the soil like clover. It proves an admirable crop for fattening hogs, by merely softening the peas by soaking. Grinding would doubtless be better. The Marrowfat and Canada pea are preferred, the latter being the best for general purposes, and freer from bugs. He raises usually from 20 to 40 bushels per acre. They are cut with a scythe, not by the usual process of mowing, but by a sort of slitting process, slightly lifting the blade upward, and rolling over the cut mass into portions of about one forkful each. An experienced hand will cut twice as fast as a mower unaccustomed to this crop. On the whole, he regards the pea as the most important and valuable crop to the farmer, and he raises all the peas that his hogs will market for him, for which it is better than old corn. Barley was formerly one of the best crops of the course, but he thinks it has tended to introduce the insect among wheat.

The clover crop he regards as of great importance, being not only valuable in itself, but furnishing manure and tending eminently to loosen the soil. Any one may see its loosening tendency by plowing the sward of two fields, one clover, and the other exclusively timothy—the former will turn over loose and friable; the latter compact and heavy. He finds great advantage in top-dressing the wheat crop at sowing, not only on account of the advantage to the wheat, but for the vigorous growth of the clover. He sows never less than a peck per acre, but finds a peck, as commonly sown, no better than a half peck sown on top-dressed wheat. The only objection to this top-dressing is the scattering of the seeds of weeds, particularly the large mayweed. But this difficulty is obviated by allowing the manure heaps to heat, and by keeping a clean farm. The crop of corn is never destroyed by worms if on clover sod—on timothy that has lain several years, it is badly injured. To prevent this injury by worms in such cases, it is the practice of JOHN C. DIXON of the same town, to sow oats first; then corn with manure; then barley and peas, followed by wheat—and grass three or more years again. J. L. TAYLOR thinks the average crops among good farmers in this town, for different years, are about as follows:—Corn, 50 bushels per acre, wheat 20, barley 30, and oats 50; but he has occasionally raised under favorable circumstances, 70 to 80 bushels of corn, 30 of wheat, 52 of barley, and 80 of oats.

LEVI COLVIN, (formerly member of the State Legislature,) of the town of Conquest, has one of the best farms in this part of the county, having taken the county premium a few years since. It contains 158 acres, and has been occupied 35 years. Very few farms are as thoroughly fenced, the owner possessing a "cedar swamp" from which he has derived plenty of timber. The fences are of "white cedar" and black ash rails, and are five to six feet high. He showed me a fence, bordering the public highway, nearly six feet high, that had stood without any repairs, for 21 years. The stakes were vertical, with wooden bored caps.

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* This remark applies also to the northern part of Ontario, Seneca, Monroe, and to the whole of Wayne county.

He has given particular attention to improving his flock of Spanish Merino sheep for many years past. His course has always been to buy the best rams he could find, and always sell his poorest sheep, keeping the best. Their fleeces now average 5 lbs. 10 ounces each—for which he gets the best market price. He shelters his sheep in comfortable sheds, open on one side. He believes, with George Geddes, that good farming is based on the *clover plant*—but thinks that sheep are one of the first requisites of profitable farming, and that *every farmer should have one sheep for every acre of land he cultivates.* In connection with clover, he recommends the use of all the plaster that can be properly applied. Some ditching is needed, which he cuts three or more feet deep, this being essential not only for thorough drainage, but to prevent the earth from falling in among the stones where these are used in filling. A neighbor had pursued the old practice of ditching only 20 inches or 2 feet deep; and now, although he has nearly two miles, he confessed that the water did not run through a single rod of the whole distance.

His course of crops, before the wheat midge made its appearance, was alternating crops of wheat and clover, buying his coarse grain for home use. He now employs the usual rotation of corn, barley, and wheat, followed by clover for two years. Peas he thinks better than barley for this purpose, and oats worst of all. He thinks that wheat after oats will produce five bushels less per acre than if following peas; and five less after peas than summer fallow. He regards the soil of this region too light for manuring wheat on the surface, but prefers applying it as soon as possible after the barley and oats are cut, and plowing it under immediately to a moderate depth. Its strength becomes mingled with the soil in a few weeks, and the scattered oats, which often injure wheat by growing in autumn, are turned under by a second plowing, and the wheat sown. A thorough harrowing each time will assist in mingling the manure well with all parts of the soil. In planting corn, he discards the notion that the grains of corn should be scattered in the hill, but prefers depositing them in contact with each other. When scattered in the hill, the stalks grow up parallel, closely together, and the crop is diminished by the consequent want of room between the ears. Fig. 1. When dropped in contact, the stalks begin to diverge as soon as they are up, and finally spread far apart, affording ample room. Fig. 2. He is so confident from experience that this is the best way, that he is "ready to give any man a good horse" who will try the experiment fairly, by a row of each, side by side, and not find more corn on the row treated as he proposes.

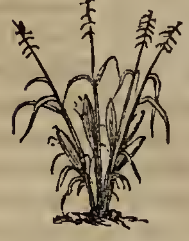

Fig. 2.

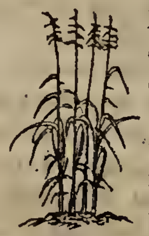

Fig. 1.

Henry Woolford is a very successful young farmer two miles north of Conquest Centre. He has 123 acres, which he bought five years ago, for $6,400. He was enabled to pay down but $3,000. The remaining $3,400 he has paid from the land in the five years, besides making several hundred rods of good post and board fence—in other words, he has cleared about $700 yearly average, with interest $800 and over, besides supporting his family, from the 123 acres. He built last year one of the best barns I have any where met with, for one of moderate size, being 36 by 50 feet, with an excellent basement, and a large shed added; the whole cost being about $700, in a region where lumber is rather cheap. The basement walls are two feet thick and all laid in water-lime mortar. The cattle-stable occupies one end, and a bay for hay extending down from above, occupies the other. The central portion, two feet deeper than the rest, is a root cellar, and will hold 250 two-horse wagon loads of roots, or 5 or 6,000 bushels. It is surrounded and protected in such a manner as not to freeze,—namely, with a thick lined floor overhead; carriage-way embankment at each end, (for driving on the floor above,) a bay at one side, and warm cattle-stable on the other. The roots may be dumped through a trap-door in the floor, for filling this cellar. The hay in the bay is kept from moulding by a thorough circulation of air beneath, effected by the hay resting on timbers a foot from the ground, the air sweeping downwards from a large window on one end, under the bay, and upwards again through a similar window at the other end. A hog-house, very neatly built of cobble-stone, was nearly completed. It is 20 by 26 feet, and is expected to cost only $150. The course of crops here adopted is similar to that already described on other farms.

Small Farms.—A number of small farms, affording specimens of successful management, were visited in the course of this journey. One of the best is that of Wm. D. Osborn of Port Byron. It contains 50 acres of very fertile land. The rotation is the usual one of corn, barley and wheat; but instead of plowing in the clover at two years, it is allowed to remain three years, and will continue to flourish for this length of time if it is well plastered. Over a peck of clover seed is sown per acre, and but little timothy. I have rarely seen a finer field of corn than one of eight acres growing on this farm—it will undoubtedly afford at least 70 bushels per acre. Cattle are kept in stables in winter, and are estimated to eat only two and a half tons of fodder to three tons of not stabled; this is less difference than many farmers have found, but in the present instance the stables are above the basement, and are therefore not quite so warm; and when the cattle run outside, they receive a partial shelter. Buckthorn hedges, 9 years old, formed a barrier between the public road and gardens; but having been managed by another person, they had not been thickened sufficiently by cutting back. The Osage hedges were good, but younger; a serious evil is the tendency in some cases to die out in patches, without any assignable cause. An acre and a half of young dwarf pears, presented a promising appearance; the ground between (10 feet each way) was planted in drills with beans, which was bearing a heavy crop. The variety is the "Marrowfat," a large white bean, of a compact cylindrical appearance, and nearly three-fourths of an inch long.

An excellent contrivance to raise gates over deep snows, and thus prevent their being twisted and broken, is shown in the accompanying cut. It represents a horizontal section of the heel-piece of the gate, at the hinge. The dark portion is the iron hinge, clasping this heel-piece; *a*, the ring which rests on the hook in the fixed post; *b*, a triangular

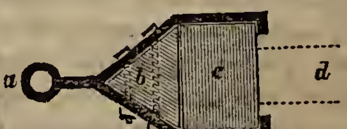

Fig. 3.

timber, the same length as the heel-piece, and firmly riveted to the hinge; *c*, the heel-piece, which slides up and down in the clasping portion of the hinge; *d*, timber of the gate. Wherever the gate is placed, whether high or low, in the clasping hinge, there it remains, being kept there by its weight hanging outwards against the hinges. It is lowered or depressed in a moment by merely lifting the gate enough to prevent this side weight. The lower hinge should be as much above the lower end of the heel-piece, as it is desired to raise the gate in winter.

Another fifty acre farm is that of **Horace Chaffee** of Conquest. Over 12 acres are woodland, leaving less than 38 acres for tillage; yet these 38 acres have for many years afforded a support and paid the expenses of the family, with common farm crops. The land possesses great fertility, and the owner ascribes much of his success to deep plowing, which varies from seven to ten inches. Everything appeared to be under excellent management, except in the adoption of a systematic rotation—as the following instance will show, indicating, however, the great strength of the soil:—Three crops of wheat in succession in three years; oats the fourth; clover the fifth; corn two years, the sixth and seventh, and wheat the eighth. A moderate amount of manure was applied. The three first crops of wheat averaged 20 bushels per acre; the last as large as the first, with the addition, as the owner remarked, of a crop of cockle, red root, and May weed, which this succession had favored; the oats the fourth year was 60 bushels per acre; and the corn the sixth year 70 bushels. He admitted that a good rotation would be better, promoting cleaner land, and tending to enrich instead of exhausting the soil. He has been quite successful with King Philip corn, by planting the hills about 2½ feet apart, and has thus raised 80 bushels per acre. The whole farm is handsomely fenced with post and board fence, which is regarded as best where the owner has to purchase all the material. It requires the labor of about one man and a half to cultivate and manage this farm.

George E. Sheldon of Sennett, has sixty acres. He does a large share of the labor with his own hands. The fields are neat and clear of weeds, and when visited, the crops presented a luxuriant appearance. The fences are all of black-ash rails, with vertical white cedar stakes, coupled with wire. The rails are cut on his own land, and are worth forty dollars a thousand in market—the cedar stakes are worth two cents each. The fence, when completed, eight rails high, including drawing materials and all labor, cost nearly one dollar a rod, or scarcely less than post and board, but he thinks it will last twice as long, or fifty years. Some of his fences, eight or ten years old, appeared nearly the same as new. His farm is mostly divided into eight-acre lots, and the usual, but not invariable rotation for these lots is the common one of 1st year, corn on sward; 2d year, oats or barley; 3d year, wheat, seeded to timothy and clover. The corn field of this year he estimates at 50 bushels per acre, but a part of it cannot be much less than sixty. The wheat is only about two-thirds of the average amount, being 20 bushels per acre; it has usually been about thirty. Hay is commonly two tons to the acre; a part of it the present season will not exceed a ton and three-fourths. He thinks a heavier seeding of grass would give better grass and heavier crops, and he intends in future to apply a peck each of timothy and clover per acre. The eight-acre field of oats was remarkably heavy, and was estimated not less than 80 bushels. There are 9 head of cattle, and over 200 loads of manure are made yearly. This is applied to the corn crop, if fresh, or to wheat if rotted; in the latter instance, on the surface and harrowed, after the wheat is sown. The owner thinks that after reckoning all the cost of labor, and all the products, including those consumed by the family, the clear profits would pay a good interest on the land, although accounts in this respect have not been accurately kept.

Among improved **Farm Buildings**, I observed an excellent new corn house, just erected by P. **Pulver** of Port Byron, worthy of notice on account of the rat excluding piers on which it stands. They are built a foot square, of brick, each on a broad stone at bottom, and they extend upwards about two feet, one foot of the upper part being furnished with a tin case covering, fitting the brick pier, over which no rat or mouse can make his way. This is better and more substantial than the common way of inverting a tin pan on the top of a thick wood post—the edges are often beaten in, and expert rats will throw themselves up by catching the wire rim. But they may, however, be foiled in this trick by shearing off the wire border, and leaving the smooth sharp tin projecting outwards. This corn crib is 22 by 34 feet, has a spacious granary at one end, cribs extending along each side, a cleaning and assorting floor between, and a floor made of slats overhead, on which a large quantity of corn may be deposited. A side door, as high as the top of the wagon, allows bags of grain to be loaded without any lifting. The whole cost is over $300.

One of the finest barns in the county is now nearly completed, and belongs to N. R. **Swift** of Conquest. It is in the form of an L, one portion being 86 feet by 30, and the other 86 by 26 feet—the whole length over 170 feet. A substantial basement, 9 feet high, for stables, cattle sheds and manure sheds, extends under the whole. The exterior is planed and painted. J. J. T.

CAYUGA COUNTY FARMING---VI.

Suggestions for Improvement.

No one farmer combines all the good practices severally observed among the many. There are none, perhaps, that may not learn something from their neighbors, and who will not therefore increase their profits by a more perfect practice. Those lower in the scale, may, of course, be still more benefitted, if they will only assume enough enterprise to carry it out. These suggestions need not be confined to a single county in their application, but may be adopted to a greater or less extent, in all parts of the country. The following are among the prominent points for effecting improvement:

1. Underdraining.
2. Manufacture and use of manure.
3. Rotation of crops.
4. Destruction of weeds.
5. Improvement of farm buildings.
6. Shelter of animals in winter.
7. Economy in feeding.
8. Improvement of domestic animals by crossing with best breeds.
9. Improvement of fences.
10. Measuring, weighing, and keeping accounts.
11. Extending knowledge of farming, by reading, inspection and experiment.

1. *Underdraining.*—A large number of experiments

have already been given, showing its great advantages. It is only necessary to remark briefly here, that those who have practiced it thoroughly on land with wet subsoils, nearly all agree that the increase of crops pays for it in about two years; and where the land is unusually wet, and has been accumulating fertile materials for a long series of years, one year has paid all the expense. But its great leading advantages are, it gives complete control of the land, lengthens the season some weeks by warming the soil and admitting early tillage, and brings every portion of the farm into a regular, enriching and profitable rotation.

2. *Manure.*—A great deal is commonly wasted. A copious use of litter, in connection with tight basins for it to accumulate in, and preventing any water from reaching it from eaves or from other parts of the ground, will double the supply obtained by many farmers. Where muck can be had, covering the manure yards with successive layers, will be found of great advantage. Every hundred acre farm should have animals enough to manufacture yearly from two to three hundred two-horse loads of manure, if properly managed.

Application of Manure.—It is worth about double, if applied in autumn and spread on the surface, and worked in in spring, especially if preceding corn. Heavy crops of corn have been raised by spreading the manure on grass before winter, and after the grass has begun to spring up green and vigorously the next spring, to turn it under to a moderate depth, and plant. Drawing it out in winter, as it accumulates, answers a good purpose. The application to wheat in autumn has been already spoken of. Compost heaps for this purpose may be made on the intended wheat field the previous spring, by thin alternating layers of manure and soil. In all instances when manure is plowed under, it should be first well harrowed after spreading, to break it fine and intermix it well with the soil. In some instances, its value is thus doubled. It is the fine diffusion with the soil, that renders autumn manuring so valuable, the soluble and enriching parts soaking through every particle of soil. In large lumps, manure cannot be of much use; and in dry seasons it thus injures; while, finely intermixed, it prevents the bad effects of drought.

In all manuring, but particularly in top-dressing, thin and frequent coats finely applied are better than heavy applications rarely given—the former facilitating more thorough intermixture.

3. *Rotation of crops* is absolutely essential to clean farming. Weeds multiply under the influence of certain crops, if they follow unchanged. But a constant change from one crop to another, checks and destroys them. A rotation also applies the fertility of the soil in the best and most economical manner, preserves order, and prevents confusion, and makes a perfectly working machine of the whole farm, costing nothing whatever but knowledge and proper attention to reduce it to profitable practice. The following is a good rotation for strong soils where weeds have obtained possession, or insects are feared:

1st year—Wheat after fallow.
2d do.—Clover, pastured or mowed.
3d do.—Corn, with coarse manure applied the previous autumn or winter.
4th do.—Spring wheat and barley, seeded by rolling.
Two or more years of grass.

If the land is clean, the following is a good course:—

1st year—Corn on sod, manured the previous autumn or winter.
2d do.—Barley, oats, peas and spring wheat.
3d do.—Wheat, previously manured, and manure well harrowed.
4th do.—Clover and timothy 2 or more years.

In either case potatoes and other roots may occupy a portion of the cornfield.

4. *Weeds.*—When it is remembered that a heavy growth of weeds is sometimes equal in bulk or weight to a small crop; and that "one year's seeding may cost ten years' weeding," it can be hardly necessary to urge farther the importance and economy of clean fields. Cultivated fields, and especially hoed crops, may sometimes be made clean when the weeds are an inch high at one-twentieth the expense required after they are two or three feet; hence, if necessary, it would be better economy to pay men double wages to eradicate them at once. All weeds which spread by the roots may be utterly destroyed in one season, at little expense, by plowing once a month deeply and thoroughly. The plants are smothered, and roots and all perish. Annual weeds which increase by seeds only, must never be allowed to ripen them.

5. *Improvement of Farm Buildings.*—A place for everything, and everything in its place; convenience of access from one part to another; lessening labor in transferring hay and grain; ample room for the storage of all products from exposure to the weather, and shelter for animals, are the prominent points to be consulted in constructing barns. The subject cannot be examined here; a volume is needed for its proper treatment. But there is one very general deficiency in most of the barns of this county, with some excellent exceptions—this is the absence of *basements.* They furnish excellent shelter for all animals but horses, cost only the excavation and walls, and pay a large share of the expense by keeping the sills and all lower timbers from decay by proximity to earth and heaps of manure.

6. *Shelter.*—Farmers in the county who have given attention to the subject, agree that about one-third of the fodder of animals is saved by sheltering them from the weather, at the same time that they grow or increase in flesh more rapidly. Cows give more milk, and sheep furnish a larger fleece of improved quality. Very few have provided comfortable and ample protection from the winter, and but few expose their animals entirely; the most have furnished them with imperfect sheds. Some have concluded that shelter is of little benefit, because they have allowed the cold winds to sweep under the sills, or through wide cracks between the boards. Such cold currents make the place but little better than full exposure. On the other hand, some who have attempted the complete shelter of stables, have decided against them, either on account of the labor required to keep them cleaned, or because this labor being partly neglected, the animals have become dirty, and they have had to breathe a foul air. There are but two ways in which shelter may be profitably afforded,—either by a dry, broad, spacious, tight shed, protected from the sweep of winds *on every side*, as the basement of a barn well flanked by other buildings; or else, by means of stables, dry, clean, well littered, and perfectly ventilated. There are many examples in the county of both these practices well carried out.

7. *Economy in Feeding.*—Half the grain fed to domestic animals is wasted in some instances by giving it irregu-

larly, in improper quantities, and in a crude or unground state. Regularity as to time is important, as animals do not digest nor assimilate their food well, when compelled to worry for it out of season. Too large an amount of food for cattle has been already shown to be not only wasteful but detrimental. J. Johnston, from long experience, commences with about two quarts daily, and never at any time, after months of regular feeding, gives any of his cattle over six quarts of ground grain.

8. *Improvement of Animals.*—A bad animal consumes much food, which produces little flesh—is hard to sell, and brings but little in market. The addition of some blood of the best breeds, added to selected native animals, will often double the value of such native stock. A mixture of Suffolk or Berkshire blood, for instance, to the common swine, will cause them to fatten with greater facility, producing often a pound of flesh with half the feed; and a cross of Durham and other improved cattle, adds greatly to the value of the stock. B. & S. Beatty of Ledyard, state that some years ago they received as an average price only twenty-five dollars for their fat cattle; now, since improvement of the breed has been attended to, they get about fifty dollars; and others have been equally successful.

9. *Fences.*—Fences generally are good throughout the county. The intrusion of lawless animals into fields of grain is a rare occurrence,—and forms the exception to the general rule. Fences might, however, be improved. The cheapest, as commonly made, is the crooked rail fence, with vertical stakes wired or capped together, where timber grows upon the place, or may be purchased near at hand. If the rails are fifty or sixty dollars a thousand, the fence, including drawing and building, costs about one dollar a rod—nearly as much as post and board fence; but with good timber, it will last twice as long, with occasional repair or resetting. Black ash and chestnut rails are preferred. Post and board fences are adopted by many. They cost, if well made, about $1.25 per rod, and will last twenty years, sometimes longer. An occasional coating of lime-wash increases their durability, excludes moss, and prevents decay. For posts, the central portion of the log is most durable; and if seasoned before setting, they last much longer. Their durability is much increased by being set over a tile drain, which is effected by cutting a ditch on the line of the intended fence, laying the tile, and placing a flat stone for the bottom of each post,—around which gravel should be compactly beaten; this this will allow the water to drain off quickly, and prevent the post from ever becoming soaked. Properly set in this way, posts of good timber would probably last fifty years or more. One or two coats of coal tar, applied warm, would assist in excluding water.

A good and cheap farm fence is made of black ash or chestnut rails set in mortises made in upright posts. Four rails, with a ridge plowed against the bottom, make the fence high enough. The holes in the posts are made with a large auger, driven either by machinery or done by hand on rainy days. The rails are placed in the posts as the latter are successively set, and can never come out while the posts stand. Such a fence, being straight, occupies much less land than the crooked rail fence, and has a much neater appearance. It requires only half the timber. The cost for each length of 12 feet, will be about as follows:—

4 rails, 6 cents each,	.24
1 post,	.12
Boring, about.	.6
Digging holes, and making,	.18
	.60

Or, about 80 cents a rod. It has some important advantages in construction:—the posts being 12 feet apart, only one hole is required for each length, and not two, as with common board fence; for the same reason fewer posts are needed, although required to be stronger; no nails are needed; and it possesses greater strength. It is perhaps the cheapest good fence. If the stuff is durable, the fence will last long.

10. *Measuring operations and results.*—The farmer only who measures the result of his experiment, can know with any certainty, what course is most profitable. One young farmer, by the use of a weighing machine, for weighing all his cattle weekly while feeding them, "saved hundreds of dollars" by two years of its use. All the fields of a farm should be measured and marked on a map, by which the acreable product of all crops may be easily ascertained. The greatest deficiency among good farmers generally, was found to be a want of accurate accounts, both with their crops, and for the purpose of ascertaining their profits.

In concluding these sketches of Cayuga County Farming, it may be thought that a full account requires that the bad side as well the good, should be told; which may be true, only so far as it may serve as a caution, and for setting off to advantage the best practices. The great majority of the farmers conduct their business in a respectable manner, but there are a few who have fallen into some one or more of the following bad practices:—

1. Allowing weeds, such as thistles, docks, stramonium, poison hemlock, &c., to grow along the highway.

2. Allowing elders, burdocks and nettles to grow along fences, and Canada thistles, foxtail, pig weed, rag weed, &c., to grow among and sometimes eclipse crops.

3. To plow, harrow and seed, or plant, land so wet that year after year it yields scarcely enough to pay tillage.

4. To allow boards to become knocked off of board fences, and clapboards from barns; and the hinges of gates to become so deranged that they must be laboriously dragged over the ground in opening and shutting, quickly wearing them out.

5. To pile manure against the side of the barn until it rots it and mires the cattle, instead of spreading it for crops, and leaving a neat clean yard.

6. To admit pigs to door-yards to root up the grass, and help themselves to swill at the kitchen door.

7. To throw kitchen slops into a puddle at the back door.

8. To build barns on the public road, thus making a barnyard of the highway.

9. To scatter implements, such as plows, harrows, rollers, &c., about the barnyard or along the sides of the road, exposed to all weathers.

10. To throw rubbish, brush, &c., into the public road, to the offence of every traveller who has an appreciation of decency, instead of destroying or converting these materials to manure.

11. Badly built board fences, half lifted by frost out of the ground, and leaning half over—occasioned by a shallow and careless setting of the posts, and by not draining the holes.

12. Cornfields with a dense undergrowth of weeds, and potatoes with a dense overgrowth of the same.

13. Hedges and trees planted and allowed to grow up with grass, and consequently never being good for anything—instead of giving them good and broad cultivation.

14. Allowing cows and other animals to run in the streets to pilfer from neighbors, and dry up by being frequently lost at milking time.

There is no one farmer adopts all these practices, and they are generally decided exceptions, more or less, to the general practice. J. J. T.

New-York State Ag. Society.

Agricultural Discussions at the State Fair.

SECOND EVENING.

The Grain Aphis.

Dr. Fitch gave a short lecture on the *grain aphis*, which has suddenly appeared in such large numbers the present year on the heads of wheat, oats, and other grain. He has not had his attention directed to it until the present year. It has appeared in immense numbers in portions of New-England, Pennsylvania, Eastern New-York, and in Canada. It was found last year in some places. Dr. Fitch met with it in his own neighborhood early in May, when grain was but a few inches high. He discovered that the females which were furnished with wings had four young in twenty-four hours—those without wings produced eight in the same time. This fact was discovered by enclosing them separately in phials. They subsequently passed from the leaves and stalks to the grain—and at this time there was a change in the color of the young ones newly produced, from the bright grass green of the early ones, to an orange yellow, doubtless in consequence of the richer food which the grain affords them. During the existence of this insect every mail brought him specimens from all parts of the country, with inquiries. The first came from the neighborhood of New-York city—in a week or two they were sent from Albany, the season there being later; next they appeared at Salem, in his own neighborhood—later still specimens came from Vermont, and lastly from Canada. When the leaves and heads of wheat and rye become dry, they leave these for the green oat crops; and as they continue to increase until this time, oats are more liable to be overrun by them. The insect is never found on the pea, unless grown with oats. This is identical with the *Aphis avena* of Fabricius, long since known in Europe, or the *Aphis granaria* of Kirby—the latter being more correct, as it is not confined to oats. The full grown insect is egg-shaped, scarcely a tenth of an inch long, green early in the season, and mostly orange after the heads of the grain emerge. During spring and summer the young are all females, and reproduce young living animals without pairing; but in autumn males appear, and then for the first time eggs are laid. They pass through winter in the egg state, on the stalks of the winter grain, and come out in spring. Dr. F. thinks this insect may prove a serious enemy to grain crops by sucking out the juices, but hopes it may not prove so abundant as it has been, as it has several formidable enemies. He has seen an ichneumon deposit eggs in the bodies of the aphis; and the lady bug or coccinella feeds on them, and there are other enemies. He proposes to try sprinkling chloride of lime over grain fields to repel them.

Management of Pasture Lands.

The rest of the evening was consumed in the discussion of the management of pasture lands, and whether new or old pastures are best, and the best mode of extirpating weeds from them. —— Woolworth of Lewis county, thought that the propriety of breaking up pastures depended much upon the nature of the soil; in some places, where pastures become well grassed over, it is well to let them alone; on his own land, which is a strong soil, he gets three times as much hay on newly seeded fields, as in fence corners and other places where the land cannot be plowed. Moss accumulates in old pastures, and the amount of feed diminishes—he has observed that his cows prefer newly seeded land to old. On the other side of the Black river, where the soil is of a coarse gravelly nature, it is better not to disturb the turf. —— Dike of St. Lawrence Co., had found the yellow dock one of the worst pasture weeds, and he extirpated them by pulling them up when the soil is wet, and at which time they will come up easily. Cutting them off near the surface does not kill them. —— Brown of Lewis Co., had purchased land over-run with briers; he kept cows and sheep on the land, and thus subdued the briers—June grass has now taken possession, and furnishes an abundance of excellent feed—he thinks it best not broken up. H. Mills of Lewis Co., gets more feed from his farm by breaking up and re-seeding, and the cattle prefer the plowed portions. —— Lyon of Lewis Co., did not agree with the remark already made in relation to not disturbing grass or gravelly land. He had found that such soils require more frequent plowing than the strong limestone land. He had found the blackberry a formidable weed, and had known a fishing rod, 16½ feet long, made of a blackberry stalk. —— Woolworth of Lewis Co., remarked again on the great importance of rendering the soil very clean by cultivation before seeding it to grass—he keeps his meadows perfectly clean—if thistles are discovered, they are immediately cut off; if a dock is seen it is pulled up at once before anything else is done, even if it requires five minutes to carry it out of the field. The quality of his butter is much improved since he has had clean fields. Cows refuse grass freshly grown where manure has been spread, but not after the cutting of the first crop of hay. —— Moffit of Oswego Co., seeds down his land after cultivating it for two years, and before all the vegetable mould of the turf is worked out, otherwise the seed does not take so readily. Grass is his main crop. He has found the dock a most noxious weed, and digs it out with a narrow tool running several inches below the surface, and never allows it to go to seed. Many farmers allow it to spread, when, if the time they spend in going to the village to hear the news, was applied to destroy it, they could dig it up five times in a season. The elder was also a bad weed, which he kills by deep plowing. He coincided in opinion with a Dutch neighbor, who said "elders was goot enough in de church; but in de farming he did not think much 'em."

President Geddes has visited a farm in Jefferson county devoted to dairying, and the question occurred to him, Do these men plow enough, or would it not be better to raise more grain? Passing over a farm in this region, he inquired of the owner if an acre in a newly seeded field they stood in, would pasture one cow? The answer was, "Yes." "Will it do it next year?" "No." "Will it the year afterwards? "O No! and in younger permanent pasture four acres are required for one cow." He had ascertained from the official reports that in the dairy town of Fabius, in Onondaga Co., where the amount of grazing and dairying is about the same as in Orange county, over three acres of meadow and pasture were required to sustain a cow; in the grain town of Camillus, in the same county, a cow is sustained on a little more than an acre and a half of grass. In this town, the cattle have the run of the stubble, and are fed with stalks, straw, &c., and much hay is sold in Syracuse besides. These facts show most conclusively the importance of mixed husbandry, which also has the great recommendation of eradicating weeds more effectually than by running largely to grass. "A man has stated here," remarked the President, "that he has 50 acres clear of weeds; if he will come to Onondaga and show us 50 acres, we will send him to Congress [" poor compensation," remarked Solon Robinson,] " or we will take off our hats to him and show him great respect." The gentleman alluded to replied, "If you will come to my place, I will give you a dollar for every weed you may show."

Dr. Halsey, of Victory, Cayuga Co., thought from his own experience, that old pasture would make better butter than recently seeded, but the latter would produce the most feed. Stannard of Lewis Co., thought that lands seeded sixteen years ago produced more than such as were seeded only three years ago, and the cattle prefer the former. Hawley of Syracuse had seen a farm which contained a broad hillside, that bore nothing but daisies and other weeds, with but little grass, dressed with plaster. A heavy growth of clover immediately took place, without being seeded; a portion was so heavy as to lodge, and the weeds were nearly extirpated. He stated that he had ascertained that in some of the dairy farms of Onondaga county, three acres had been required to support a cow; but newly seeded to timothy and clover, a cow was now sustained on an acre and a half, and the animals would prefer this feed to that growing on hillsides which could not be plowed.

A person whose name was not heard, had found that land seeded three years kept twice as many cows as when eight years seeded. Ellison of Herkimer county, thought plaster and manure, on old pastures, would make them equal to new ones—he said that plaster had eradicated daisies, by promoting the growth of grass and smothering them out. Cows prefer grass where plaster has been sown. The natural meadows on the Mohawk and Canada creek, which have been in grass thirty years, are so luxuriant as to cut a ton and a half per acre at the second crop—the grass is timothy and red clover. Manure is applied in autumn and bushed in. The land is not overflowed. He has over 900 acres of land, and speaks from his own experience.

Solon Robinson has a piece of grass land on primitive rock. Three years ago there was a larger crop of white daisies than all the rest of the growth, grass and weeds combined. It has been manured, plastered, and treated with salt, at the rate of ten bushels per acre. He thinks the salt did the most good; it was obtained at the packing houses for six cents per bushel, and the daisies have now disappeared. He thinks the plaster lessened the daisies, and the salt finished them.

As a summary conclusion it was resolved,

1. That on lands not easily cultivated, top-dressing of fertilizers is required.
2. On arable or easily cultivated lands, either top-dressing or enriching by rotation, is necessary.

THIRD EVENING.

The Agriculture of New-York.

The subject was—"The Agriculture of New-York—does it pay a fair compensation for the capital and labor employed?"

E. **Parker** of Watertown, said he was a practical farmer, but had kept no book account to show exactly his losses and profits, but thinks such an account would have run him in debt—he had commenced with 44 dollars 20 years ago, and had "hammered, and pecked, and drilled along until the present time," and had succeeded in making a small living, and his farm would now sell for some $4000. He ran in debt for his farm and for his buildings, and found it a pretty hard up-hill business; has paid from 3 to 500 dollars yearly for hired help, yet with "a hard pull and dig" had been enabled to pay for his farm. On the whole, he thought farming a pretty hard business.

Several instances of very successful farming having been mentioned, A. L. **Fish** of Herkimer county, remarked that in isolated instances farming had been both successful and unsuccessful, but he pointed to the whole State of New-York, which had arisen to a great height of wealth—was this prosperity owing to the labors of the mechanic—or to those of the merchant? No, they were chiefly to be attributed to farming—the cultivation of the soil had produced this wealth. **Solon Robinson** said the main question is—is farming as good or a better business for a young man to enter, than trade or other similar occupation? The city merchant ascertains from the accurate accounts which he keeps, showing precisely the amount of his gain, that he makes ten or twenty or even fifty thousand dollars a year—yet after a while he becomes bankrupt. One chief reason of this result is, because he did not estimate the expenses of his family. With the business of the farmer, no risk of this kind is incurred; and although he does not live *so fast*, he lives equally well and honorably. He would like to know what proportion of the merchants in New-York would be worth $50,000 at the end of their lives, compared as a mass, to the whole number of persons successfully engaged in farming?

—— **Ellison** of Herkimer county, suggested whether if the merchants of the city had pursued as economical a course of living as the farmers, failure would not in some instances been avoided. He thinks that farming is a paying business—and that the mechanic and the merchant are necessary—that the man who digs in the earth has rather the advantage of the mechanic. Instances, he said had been given, of great success in farming in grain districts; he had known many instances also in the grazing regions, where men had become rich in a few years. One of these had discovered that it was just as cheap to keep a good cow as a poor one, and had made 700 lbs. of cheese annually from each animal—others had made $60 per cow in each year. They used plaster and top dressings of manure on their lands. In the dairy town of Fairfield, in Herkimer co., large profits had been reached, although there is but little plowed land. The manure of the animals is applied as a top dressing to the meadows, and a high degree of fertility kept up.

Ezra Cornell of Ithaca, in order to avoid the objection made to giving isolated cases, presented a very interesting statement of the agricultural statistics of Tompkins county, which he had with great labor collected through the school districts and from other sources. He had ascertained that there were 204,000 acres of improved land, and 63,000 unimproved;* these were valued at 11 million dollars. The capital used for the cultivation of this land, including cattle, horses, sheep, swine, and other animals, and $379,000 worth of tools, &c., was estimated at two millions; making the whole amount of capital invested in farming in that county, 13 millions. A carefully made statement was then given of the annual products, the details of which would occupy too much space in this report, the numerous items of which were obtained through a competent person selected in each school district. This estimate of all the farm products of the county for one year amounted to $2,713,000. The usual allowance made for the *labor* of the farm is one-third; but allowing for errors, taxes, and seed, and calling the whole *one-half*, there would remain for the nett proceeds $1,356,000, which would be a little over *ten per cent.* This does not include the many farm improvements in buildings, dwellings, barns, fences, in draining (of which 150 miles had been made in a single town,) highways, &c. E. Cornell remarked that farmers generally were improving their condition every year, rode in better carriages, had increased home comforts, besides which they often sent their surplus money west to buy new lands for their sons, and it had been also discovered by examining the county records, that most of the bonds and mortgages were held by farmers. He said in conclusion, that he had not been able to discover any facts from which he would advise farmers to quit their business for other pursuits.

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* We give the round numbers only—the statement which he presented furnished minuter details.

S. Walrath of Canton, St. Lawrence co., thought there was a chance for mistakes in such estimates, and that farmers generally give one quarter more than what they really raise—he recommended that accurate measurements should be made, and the whole county thus estimated—and if this were done, it would still show farming generally to be the most profitable of any business. E. Cornell replied that by carefully selecting proper men, for example such as the gentleman who had just spoken, very accurate results might be secured, and far more reliable than through the census.

—— Hawley of Syracuse, said that many committed the mistake of supposing that farms should pay a full interest besides all that was consumed in the family. A clerk who receives $600, can perhaps scarcely support his family, as he has to purchase all his supplies—the farmer has these already at hand. He had travelled lately through all the dairy districts in the western part of this state, and had observed a general prosperity among the residents—they lived in good houses, set good tables, rode in comfortable carriages, and educated their children at academies; in the city, these luxuries were confined to a comparatively small number, and many of these subsequently fail. He had known poor boys run in debt for 50 acre farms, now owning 500, 600, and in one instance an 800 acre farm, all paid for at a high price, from the land itself. He advised farmers to educate their sons as farmers.

James Vick of Rochester, dissented from much that had been said; in allusion to the successful instances that had been mentioned, he could cite a dozen others where farmers had sunk all they had; he thought that of many who had become rich, they had succeeded through speculation, that is, by the rise in the value of their lands, which were bought at low prices, and afterwards became valuable. He thought farmers generally were quite ignorant, and knew but little of scientific agriculture.

—— Hawley of Syracuse, said that a farmer who undertakes to speculate, generally fails, and in almost every instance where farmers had become bankrupt, it was by not diligently attending to their business, but by neglecting it for other pursuits, or by extravagance and idleness.

Solon Robinson asked, What riches are? The answer must be, all the comforts of living. Agriculture had given these comforts and improvements—it had made the wealth of the whole country. He cited the growth of our inland cities—looked over the great west, which if it had not blossomed as the rose, had raised some little grain, and had occasionally sent a bullock down to New-York—he spoke of the enormous increase in the value of these wide regions, and asked who has created it all, if not the farmer—and is not farming then a paying business?

—— Huntingdon of Black River, said he had hunted squirrels on the ground where this large village of Watertown now stands, and when the land it occupies was thirteen shillings an acre—that farming had built it up; and he thought from his own limited experience on 56 acres (being chiefly a mechanic) that the products of farming might be doubled.

—— Johnson of Buffalo, said he was a young man who had been unsuccessful in farming. He had no farm of his own, and wanted to know how to get one? He had bought a hundred acres by running in debt; and being in poor health, and able only to superintend the labor of others, had been scarcely able to pay the interest. After two years, he became discouraged, and sold his land.

A. B. Conger of Rockland co., (the chairman of the meeting, and who had ably superintended all these discussions of the state society,) remarked as a summary of the whole subject, that although many individuals of energy and judgment could run in debt for land and pay for it in the products, yet that generally speaking, farming to prove successful, required a certain amount of capital to carry it on—if this were insufficient, one must expect all the penalties and difficulties resulting from a want of capital in any other case. A most important consideration in any business, is its permanence and security—a business which farming eminently possesses. A person residing in the city of Boston, had kept during a long life, a list of all such as had pursued trades; and he had found that out of every hundred so engaged, ninety-seven had failed—and of the remaining three per cent, a small portion only continued to hold their means to the end of life. There are also certain failures in bad seasons in farming, but we must balance the cases and take the average. The owners of real estate in the city of New-York, after paying all the taxes, do not generally receive more than three and a half per cent; and if 5 per cent is obtained as an average from farming, (whether all or a part of this be expended in improving and increasing the value of the land,) he proposed as a question for the votes of the members present, that this be regarded as paying a fair compensation. He alluded to the estimate presented by Ezra Cornell, where the products of the $13,000,000 invested, were over $2,700,000, and said that even admitting $1,700,000 were consumed for labor, taxes, and all contingencies and errors, it would still leave $1,000,000 as the interest on $13,000,000, or over seven per cent. He stated that in England, a capital of $10,000 was required to stock, manure and carry on a farm of 150 acres; and that there, where there is capital enough, farming proves very profitable. It is the improved farming that has brought the rental up from one shilling to three pounds, (15 dollars) per acre. Farmers here do not use capital enough. He made the following proposition, which was adopted by the meeting, without a dissenting voice, viz: that the agriculture of the State of New-York, when pursued in accordance with the rules which govern business operations, and with the light which science and practice throws upon it, pays a fair compensation for the capital invested.

Ezra Cornell submitted a resolution which was adopted, requiring the Executive Committee to furnish blanks to enable all the counties to procure statistics similar to those that had been presented this evening.

The meeting then adjourned *sine die*.

[For the Country Gentleman and Cultivator.]

Agricultural Notes in Monroe Co., N. Y.--No. II.

The Way to Commence Farming.

It is universally acknowledged, I believe, by the most successful farmers, not only in the Old World, but in America, that a *mixed husbandry*—rearing and feeding neat cattle, sheep and swine in connection with raising grain—lies at the very foundation of successful and progressive agriculture. Still it is not denied that there is much good agriculture in the world which pays well, and which might be called progressive farming, where not a hoof is kept from the end of one year to the other. But in order that agriculture may be a paying and at the same time a self-sustaining system, the only reliable way is to keep more or less stock, and consume a large proportion of the coarse grain whith is raised on the farm. If a farmer has an abundance of surplus capital with which he can purchase guano, ground bone, poudrette, or other fertilizers, he may keep his soil good, and raise large crops of grain or grass without keeping stock of any kind. But this would not be such a system of farm management as we would endorse or recommend to those who are about to commence farming operations. The great idea in being a successful farmer, is to commence farming with a very limited capital, and to adopt such a system of management as will return capital enough to defray the expense of cultivation, and pay for the improvements on the farm, and leave a profit towards paying for the land, and at the same time not impoverish the soil at all, but on the contrary improve its fertility from year to year. This may be set down as good farming, as a self-sustaining system of agriculture; and it is proposed to go a little into the details of the system for the special benefit of those young farmers who may be about to commence their career in the cultivation of the soil, and perhaps I could not do it in a more satisfactory manner than by recording the system of farm management adopted by Mr. Isaac Bower, North Chili, Monroe Co., N. Y. In the outset I may be allowed to say that Mr. Bower was formerly one of the best and most thorough-going farmers of Tompkins Co., who always raised good stock of all kinds, and particularly neat cattle and swine; and his superior crops of grain were a certain evidence that all his manure was economically saved and judiciously applied to his soil. Having sold his farm, he located in the place just mentioned about three years since, on a farm of about 100 acres, which, it is said, had been very poorly managed for many years.

Mr. B. possessed a good competence, but no surplus capital with which to defray the expense of stocking and improving his land; but his main dependence for revenue was, and is, on the productions of the farm.

Mr. Bower's ideas of farm management are that one must have a good supply of barnyard manure in order to keep his soil in a good state of fertility; and that in order to have that manure he must keep stock, and in order to have *good* manure that stock must be kept well, and that it is much less expensive, and far more profitable, to keep stock of all kinds *well*, than to *half* keep them, and far more profitable to pay a good price for a choice animal than to attempt to do anything with an inferior animal, even were it furnished gratuitously.

Management of Cattle.

After Mr. Bower had purchased his farm his first step was to purchase stock for his farm. Among his neat cattle is now a very fine Durham bull, which he purchased for $100, and a cow for $150, out of one of the best herds in the Empire State, and he purchased none but superior animals. He made calculations about how many he could keep and not feed his pasture too close. He usually keeps about three to six good cows, and raises their calves usually by feeding them, and seldom allows them to suck their dams. From the birth of a young animal until its carcass is fully developed he aims to keep every animal improving gradually during both summer and winter. His calves are not fed as high as if they were being prepared for veal, but are kept growing and in a thriving and moderately fat condition, and his young bull and heifers now on hand are very nice animals. When there is not a good supply of grass, every animal receives a little meal. He has now one *old* cow, which is a most superior animal, not only for stock, but for butter and milk, which he has fed meal all summer, and he thinks it pays well by increasing the *quality* as well as the quantity of milk. He is very careful in late autumn, when grass begins to fail, not to allow them to lose any of their flesh which they have taken on during summer. His animals are all properly protected from storms and pinching cold during the severity of winter, and every one gets a little meal daily in addition to a good supply of cornstalks and good hay and straw.

I asked him how much heavier his young animals usually are in the spring than they are in the fall when he commences foddering them.

As several of them had been weighed in late autumn, and then again in spring, I found that one two year old steer had gained 128 pounds, and another 114 pounds, while the bull had gained 194 pounds, with simply ordinary keeping. He calls ordinary keeping about one quart of meal daily, with some hay, cornstalks and straw, and towards spring he increases the amount of meal, sometimes to two quarts per head. At the age of three or four his practice is to increase the amount of meal, sometimes to eight or ten quarts per head, until they are ready for the shambles.

Management of Swine.

Instead of availing himself of swine of a very exceptionable breed, he procured a sow or two and boar of what he considers the best breed, and immediately commenced feeding out his coarse grain. His practice with swine is worthy of adoption more generally, as his manner of producing pork is founded on the most correct principles of philosophy of producing the greatest amount of pork from the smallest number of pounds of meal. He feeds but little whole grain; and as soon as pigs are old enough to be weaned they are well fed with milk and meal, and kept in a close yard and pen, and not allowed to race about the fields, and to run off during the day half as much fat as they have taken on. He has at the present time five beautiful sows with pig, and a lot of shoats and hogs being fattened, and a few store pigs. He sows a few acres of peas and feeds them, vines and all, to both his store hogs and to those that are being fattened.

He has experimented more or less in crossing various breeds, and although he has met with very satisfactory success in all his efforts, he thinks that a cross between the Berkshire and the red-haired Russian produces pigs a little superior in almost every respect to any other cross which he has tried. And I think his conclusion is a very correct one, for while a cross between many other breeds will often produce very nice pigs in most respects, in some very important points they will be quite deficient. Every man who has had but a limited experience in crossing swine knows that there are many grades, and some full-bloods, that are very nice, with the exception of *size*. They will make fine pork, but are intolerably small. But his pigs—the product of a Berkshire boar and a Russian sow—have great length and breadth, and take on fat very readily, and are good feeders, and make very profitable pork for market. I think it would be difficult to find a lot of shoats which possess a single point superior to his shoats, the product of the Berkshire and the red Russian. Mr. B. is located on the New-York Central railroad, and sends his pigs to any place by express where he may have an order. His five sows will farrow in autumn, and instead of selling his crop of Indian corn at a very low figure he expects to have it ground, and feed it to these pigs, which will return him more than twice as much per bushel as he could obtain in any of the grain markets. He thinks that there is great profit in consuming Indian corn at home if one gets a good breed. I can testify from my own experience, and from what I have seen of his management of swine in years past, and at the present time, that he realizes far more from his coarse grain by feeding it to swine and neat cattle than he could do in any other way.

When I was at his house he had just thrashed his wheat—in August—and had contracted all the flour of a load of wheat to laboring men in his vicinity. By this means he secured a good price for new flour, and retained the bran and shorts for feeding his stock.

Management of Manure.

Mr. Bower aims to make all the barnyard manure he conveniently can, and he is very careful that no more of it be wasted than will unavoidable escape by evaporation when hauling it to the field, and while it is spread on the soil. He prizes very highly the manure of his animals which are being fattened, as such manure always affords an abundance of grain-producing material, which will not only produce a heavy crop of grass and straw, but very large ears and heads, and plump kernels. He uses up all his pea-vines for littering the yards and pens of the swine, which will absorb all the liquid manure, and by being mingled with the solid portions a fine lot of the best quality of manure is produced, which tells a very useful story about the profit of depending for a good share of the profits which accrue from feeding stock, in superior crops of grain and grass. Nothing in the line of manure is wasted. Every corner of his manure yard had been neatly scraped with a broad hoe, and hauled to the field, where it is not allowed to remain in heaps until it is half wasted away, but is neatly spread and plowed in as soon as practicable.

Management of Poultry and Eggs.

Mr. Bower keeps a few dozen choice hens for the eggs which they produce, and although he has been pretty well "shanghaied" in years past, he gives the preference to the black Polands as layers, although the Dominiques are preferred for market or for the table.

Their manner of keeping eggs fresh until they will command a good price is worthy of notice. As the eggs are collected from day to day they are put in a barrel, with the small ends down, on a laying of oats. When one course of eggs is full, another laying of oats, and then a laying of eggs is carefully put in, until the barrel is full.

In the early part of winter, or when eggs command a good price, those that are kept in this way will readily sell for the price of fresh eggs. Great care is exercised to save none but those that are entirely fresh, as those on which a hen has been permitted to sit for only one day or one night will be injured so much that they will not come out good after having been kept two or three months. Wheat bran would probably be quite as good for keeping them as oats.

Flax Seed and Oil Meal.

Mr. Bower speaks highly of oil meal and of flax seed meal, in connection with other meal, for feeding stock of all kinds. He thinks that when farmers sell their flax seed at a low price and purchase oil meal at a high price, they sacrifice their own interests far more than they are really aware of.

The statute weight of a bushel of flax seed is, I believe, in the Empire State, fifty-eight pounds, which would be, at $1 per bushel, less than two cents per pound. Now, after expressing almost all the oil from the seed, which would afford a great amount of nourishment to stock, the oil meal—the refuse or bran—is sold at two cents per pound in most places, which is more per pound than the pure seed.

Mr. Bower's practice is to feed the *pure seed*, instead of having all the best part extracted, and then of feeding only the refuse. He mingles about one bushel of flax seed with about ten bushels of oats and corn, or barley, or any other kind of coarse grain, and has it ground all together. He thinks this makes most excellent feed for all kinds of stock, and gives a neat gloss to their coats, and keeps their bowels in a healthy state, and makes very excellent manure. The quantity above stated is not sufficient to operate at all as a cathartic.

Stocking Down Land.

Mr. Bower's practice in regard to stocking down his fields, is to sow in autumn, after wheat, about four quarts of timothy seed, without harrowing in or bushing in, and in the following spring he sows from three to four quarts—six or eight pounds—of early clover seed on the same ground. He had when I was there two large fields which had been seeded in this manner, and the clover and timothy formed a complete mat of grass, and was very large and luxuriant.

He usually gives his wheat soil a good sprinkling of fine manure, and sometimes has hauled muck and spread it thin where the winter wheat is sowed, which increased very much the crop of wheat, and facilitated very much the catch of the grass seed.

In addition to his system of underdraining, which is now in progress, there are many other items of interest in his system of management which would be well to notice, to which we may refer at some future period. We have no misgivings in alluding to Mr. Bower's farming, for we are sure it is a *most excellent beginning*, and may be set down as *progressive agriculture*. S. Edwards Todd.

CHEESE-MAKING IN ONEIDA COUNTY.

Messrs. Fraser & Crosby of Rome, who received the first prize on Cheese at the late Oneida County Fair, furnished the following statement in relation to its manufacture:

The Cheese on exhibition by us are made alike in every respect, although at different dates of the same month, viz: the 6th, 18th and 26th of June, from the night and morning's milk of 400 cows; the night's milk being strained, and emptied into two tin vats, set in wooden ones, with a space left for water; about one gallon of pure water being added to every *ten* gallons of milk to prevent the cream rising over night, and to destroy the animal heat; the water was then allowed to run, and the milk thoroughly stirred until it was cooled down to 68 degrees, the water being kept running all night, between the outer and inner vats. The morning's milk was then emptied with the milk of the previous night, and well mixed by stirring, without the addition or removal of cream. The milk was then heated to a temperature of 83 degrees, by steam conducted into the water between the vats; then anatto dissolved in ley sufficient to give the desired color to the curd, and rennet enough to produce perfect coagulation; in about forty-five minutes it was thoroughly mixed with the milk. The curd was then cut in blocks about an inch square, with a set of wooden blades, to allow the whey to rise. The whole was then gently broken with the hands, and at the same time the heat raised to 88 degrees, when after stirring fifteen minutes the curd was allowed to settle, and the whey drawn off from the top with a syphon. The curd was then broken with the hands for thirty minutes, and the steam applied, raising it to a temperature of ninety-four degrees, when it was stirred gently for about twenty minutes, the curd allowed to settle, and the whey dipped off. It was then stirred and broken for twenty minutes, and heated to ninety-eight degrees, at which point it was stirred for about ten or fifteen minutes, and then covered with cloths, and left standing until thoroughly done; it was then dipped into the sink and stirred thoroughly to allow the whey to run off, and the curd to cool gradually to keep it from adhering together in large lumps, so that the salt may have the same effect upon the entire body of the curd. Two and three-quarter pounds of solar salt being used for every 100 pounds of curd.

The cheese was then pressed for about one hour, then taken out and bandaged, turned and put back to press, until the next day's curd was ready to be taken out. It was then taken to the curing room, the face rubbed with whey butter, and left standing until the next day, turned, rubbed with the same on all parts, after that turned every day and rubbed with the hand, grease enough only being used to prevent cracking or mould.

The rennet is prepared by soaking merely in water, and using salt enough to prevent the whole salt from dissolving; kept in stone jars in a cool place.

PLANTING CHESTNUT FOR TIMBER.

Young, second growth chestnut trees, make excellent fencing and other timber—and if, in addition, it be cut in summer, (whether with or without regard to the age of the moon, no matter which,) it will last a long time. John Johston of Geneva, finds second growth chestnut best for his fence posts—old trees he regards as of little value.

Chestnut trees on light soil, grow very rapidly. Any farmer who has a few acres to spare, may make a very valuable investment by planting a chestnut orchard. The best way to do it, is to take a field that is suitable for some cultivated crop, corn for example. Plow two or three furrows together into a ridge every twelve feet apart, over the whole field, either late in autumn, so as to admit of early planting, or else very early in the spring. Plant the chestnuts along this ridge, three or four in a hill, about the same distance as hills of corn. They are difficult to transplant with success, or without check in growth, and therefore this mode secures vigorous young plants at once, thinning out all but one in each hill the following year. Plow the spaces between, and plant with corn or potatoes, and cultivate and keep clean the young trees with the rest of the field. If care is taken by using stakes, each hill of chestnuts may be made to stand in a row with the hills of corn, so as to cultivate the whole field both ways. Or, if the corn is planted with a drill, it will not be necessary to take any care in this respect, as the cultivator will run one way only. This cultivation, if kept up for a few years, with crops of corn, beans, potatoes, carrots, &c., or with plowed strips near the trees, and sowed grain between, which is not so good, will give a very rapid start to the young trees; and if they are thinned out in some years as they crowd, thus giving good stakes, they will by twenty years, form a very valuable plantation—this being the age found most profitable to cut down young timber for renewal. A great advantage of this plan is, the wagon used for drawing off the timber may be driven between the rows in a straight, smooth road, and not as in common irregular woods, with constant twists and turns to avoid hitting trees, stumps or roots.

Many fail in raising the chestnut from seed, because they allow the shell of the nut to become dry. Take fresh chestnuts in autumn, and mix them with slightly moist leaf mould, and leave them exposed, out of the reach of mice, all winter—they are best if in contact with the moist ground. Then, as soon as they first begin to sprout in spring, plant them two inches deep.

Locust trees may be planted in the same way with corn, but need not be planted before the corn itself, as they will not sprout without scalding; for this reason they are more easily managed. They make admirable timber, when not injured by the insects.

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[For the Country Gentleman and Cultivator.]

RIO GRANDE SPRING WHEAT.

An extract from the Minnesota Farmer, in the last Co. Gentleman, highly recommends the Rio Grande variety of wheat. I have raised it for the last four years, and have not failed of having a good crop. The spring of 1857, I sowed one bushel, (brought from Illinois,) and harvested from it 14 bushels of the finest spring wheat I have ever seen. It makes the whitest and sweetest bread of any variety of wheat ever raised here.

Deerfield, Mass. JAMES CHILDS.

[For the Country Gentleman and Cultivator.]

WINTERING LATE SWARMS.

In the Co. Gent., Aug. 22d, "A Young Farmer" asks, "Is there no way to preserve a late swarm of bees over winter, or must they be taken up after the old fashion." I could say both yes and no to this question. I must know its conditions to give the proper answer. The simple fact of being *late*, has no effect on its wintering qualities. I have had swarms after the 15th of August that wintered without the least trouble, having provided themselves with everything necessary from the flowers. I have had them in May that failed to do so, and were lost in consequence. If a swarm in addition to being late is small, and has constructed but few combs, and has but little honey, which I suppose is the kind of swarm meant by A Young Farmer, the chances of successful wintering in this latitude (43 deg) are very few, and I would advise that all such be taken up if the owner has not philosophy to put up with a loss. By killing the bees of such a hive now, as soon as the brood is hatched, and getting all out from between the combs, and setting the hive and contents away in good order for another year, it would be valuable—worth just as much to a new swarm as so much honey and comb of its own making.

But should it be desired to keep a colony, however remote the chances of success might be, I will give some of the requisites and a few directions. First, a good colony of bees is important. If too few, add those of some condemned stock or swarm, or unite two or more small ones, smoking to prevent quarreling, with tobacco or puff-ball, and confining them to the hive some two or three days. Another equally important item is honey. They should have combs sufficient to hold enough for winter—one with less should be disposed of as above. Feeding should be done sometime in October, after the brood has all matured. Let it be done in as short a time as possible, otherwise the new brood that the feeding will induce them to rear will consume too much of it. Not much less than twenty or twenty-five pounds of contents—bees, combs and honey—will be sufficient. Surplus boxes part full set on the hive, with a hole for communication, will be emptied in a short time, and still more quickly if the caps are cut from the ends of the cells, before putting them on. Combs taken from a hive and put in a box will answer just as well. Strained honey, if taken from a healthy hive, will do to feed without any preparation. Put it in a shallow dish with some floating material to keep the bees from drowning, and set it on the hive. If the dish is very smooth at the sides, something must be put by them to assist the bees in creeping in and out. When feeding at this season, particular care is requisite in all cases to have the box cover to fit closely, to keep out robber bees from other hives. They are quite apt to scent the honey and make an effort to carry it away, and sometimes when we have fed enough to bring the hive up to the required weight we find it lighter than when we began. When honey cannot be had, sugar may be substituted many times with good results; but this had better be fed as consumed through the winter. The hive is taken to a dark, warm cellar, turned bottom up, and the edges of the comb cut off square, and some shallow dish set on them. Syrup made of good white sugar as near the consistence of honey as possible is poured in. Two or three gills is enough for a week. The dish will be fastened to the combs very soon, and should not be broken loose till done feeding, as it disturbs the bees, which should be kept as quiet as possible while in the house. Whenever a pleasant day occurs, suitable for the bees to fly, *all* that have been fed should be set out for an airing. We cannot get the feed of an exact consistency of honey, and it will sometimes—quite often—produce dysentary, making it necessary for them to have an opportunity to leave the hive whenever the weather will admit. Such as were fed in October often leave some of their honey unsealed that will sometimes sour and induce the same effect. If pleasant days occur once or twice a month, so that they can fly, such fed swarms will do very well, but in steady cold weather for a long time they are quite sure to suffer. M. Quinby. *St. Johnsville, N. Y.*

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Moles.—Please tell me how to rid a piece of ground of moles. I have a few acres which have been infested with them this season. G. H. B. *Circleville, Ohio.* [We know of nothing better than good rat-terriers, or in their absence, meat poisoned with strychnine—can any of our readers furnish better remedies ?]

[For the Country Gentleman and Cultivator.]

An Excursion by Rail and Carriage among a Portion of the Farmers in New-Hampshire.

Messrs. Editors—During the past week I took a trip to Plymouth by railroad, and visited some of the adjoining towns by carriage drive. Plymouth is about 50 miles north of Concord, N. H.

My excursion gave me an opportunity of forming a pretty accurate estimate of "farm crops" in the section of the State traversed. The hay was considered more than an average with that of the past two or three years. Winter wheat, though not very extensively grown, yielded good returns, getting ahead of rust, midge and lice. Spring wheat, rye, oats and barley, not as good as last year, but still pretty fair crops of each. Corn I think will husk out better than it did the two past harvests. I saw hundreds of fields of nearly "dead ripe" corn, nineteen-twentieths of which had, and will have, the stalks cut, or topped. Very few fields had been "cut up" and shooked, as is so largely practiced and strongly advocated by farmers in some other sections of the country. The different methods of harvesting the corn crop have been discussed in the agricultural journals, "pro and con," for over forty years to my certain knowledge, and it seems the question is as far from being theoretically and practically settled as it was when first agitated. My decision of the matter in dispute is, "let each be persuaded in his own mind" in the management of his corn crop, and practice accordingly. Col. Paul R. George of Hopkinton, N. H., has a field of four acres of very fair and even grown corn on the alluvial soil bordering the Contoocooke river, which he has recently treated in the following manner, viz: First four rows across the field have had the stalks cut, or topped; next four rows cut up near the ground and stooked; next four left standing with the stalks uncut. The same course is carried over the whole field. The third part of the crop whose stalks have been cut will be harvested by itself, husked and carefully weighed or measured. So with the other two portions of the field. The Colonel assures me the experiment shall be accurately carried out, and he has promised me a detailed report for the Co. Gent. On Tuesday morning, 10th inst., there was much frost, and in some low situations corn and other plants were considerably frosted, and in consequence of the leaves being killed the corn must fail to fully mature and ripen well; however it is quite satisfactory to know the frost was confined to comparatively small districts, and that the fine warm weather since has put most of the corn beyond injury of our ordinary autumnal frosts.

From the many extensive fields of potatoes I saw, I think there was an unusual quantity planted last spring, and what is quite encouraging, there has been but very little rust or premature decay of the tops, and I have yet to learn of the first field suffering from the *rot*, like that of past years, though it is quite probable the dry rot, so called, may destroy a small portion in the cellar during winter, as has been the case in many instances this past year or two.

Apples and other fruits are very scarce in this and most other sections of the State, but at Plymouth and vicinity there is a fair amount of apples, though mostly on natural or ungrafted trees. From the foregoing statements in regard to the crops in the Granite State, we shall not be likely to suffer for most of the necessaries of life, for upon a pinch we can dispense with southern sugar, rice and tobacco, and not suffer greatly neither.

The town of Plymouth is pretty well up in the vicinity of the "Everlasting White Hills,"—from which, it is said, the last "winter's crop of snow" has not yet fully disappeared. From the elevated and mountainous section of that part of the State, some persons who have never visited it may be led to suppose it cannot be a good agricultural district of country. Such a supposition is entirely erroneous. Plymouth, and the adjoining town of Holderness—"over the river,"—contain a large number of excellent farms and farmers, scarcely to be excelled in any other portion of the State. The best farms, however, are located upon the opposite banks of the Pemmigewassett and Baker's rivers, which form a junction near the large and beautiful village of Plymouth.

The extensive intervales bordering these rivers, were originally of the most fertile character, and by good farm management they are now mostly so, yielding heavy crops of corn, potatoes, oats, hay, roots, &c., all of which find a ready cash sale at the farmers' doors—saving them the trouble and expense of seeking a distant market on the seaboard, as formerly; railroad facilities and manufacturing establishments in their midst, have wrought this favorable change, the good results of which are seen on every hand—in the well finished and furnished farmhouses, capacious barns, and neatly arranged out-buildings, walls and fences, and every thing else pertaining to an intelligent, wealthy, moral and patriotic community of farmers, who till their own soil, undisturbed by rapacious landlords, rents and tithes, as is the case in many of the European States.

Of the many farms I noticed, I have only time now to refer to two of them, viz., those of J. S. Ryan and N. C. Cummings. Mr. Ryan was a native of Plymouth, the son of a farmer of that town. While young he left home for Boston, and for some years served as clerk in one or more stores in the city. After which he went into the mercantile business, which he successfully carried on for some years; having acquired a handsome property, he returned to the "Old Homestead." He has built a house with all the conveniences of a first-class residence of the city, with the single exception of the *gas*. He has gone into farming with the same energy and zeal with which he was actuated while engaged in business in Boston—keeping an accurate account of "out-goes and income" with his farm—leaving nothing to the hap-hazard chances of guess-work, as is unfortunately too much the case with a large portion of our farmers.

In November last I visited Mr. R., and gave a somewhat detailed account of his farm, which was published in the Co. Gent. This precludes the necessity of going into a lengthy description of his farm at this time; but I will refer to an experiment he was then making, in *claying* an eight acre field of light sandy soil. The field had been long under culture, and being very sandy, liable to suffer from drouth, &c. In 1860, the field was in corn, rye, and oats. After the crops were removed, the whole received a heavy dressing of a clayey marl, taken from a deep cutting about one-fourth of a mile from the field. The number of loads applied was four hundred, (of 40 bushels per load,) at a cost (per contract) of twenty-five cents per ox-cart load. The marl was spread in November, and left upon the surface to the action of the atmosphere and the alternate freezings and thawings of winter. Last spring the field was sown with 15 bushels of the English Potato-oat—yielding an immense growth of straw, and apparently a corresponding quantity of grain, which has not yet been threshed. Herds-grass and red and white clover seed were sown with or at the time the oats were. A better catch of grass is seldom seen than among the stubble of this oat field. There is something in this kind of marl peculiarly favorable to the growth of the several clovers. In the long run, I have no doubt the $100 expended for marling, will prove a better investment than if expended for any of the commercial manures now in the market.

This year there was 85 tons of hay cut upon the farm. "Under the plow," 10 acres of corn, 7 of potatoes, 21 of oats, 8 acres rye, 5 of wheat, 5 of buckwheat—total 56 acres—besides beans, vegetables, roots, corn for fodder, &c., equal to four acres. The stock on the farm consists of 35 head of cattle—being Durhams, Devons, Jerseys, and native,—6 of the horse kind, 8 swine, Suffolks from the Stickneys, Boston, and 120 sheep, consisting of native, South-Down, and grade. In the flock is a fine South-Down buck, from the flock of Sidney G. Fisher, Philadelphia; and recently he has purchased a buck and four ewes of the Hon. R. S. Fay, Lynnmere, Lynn, Mass. The sheep are, I think, called "Improved South-Down." They had not arrived when I was there.

This autumn he has sown 28 acres of winter rye, and 5 of wheat. Last spring, he sowed one ton of American guano, on partially bound out grass land, very much increasing the crop. The unusually wet spring, and early summer, no doubt operated favorably for the experiment. The result would have doubtless, been different the year previous, in consequence of the lack of rain that season. He has also—like many others of the farmers in his section, made free use of Coe & Co.'s superphosphate of lime, upon the corn and some other crops, and in nearly all cases, with very decided and favorable results. The example of Mr. Ryan, in improving two or three old farms, now in his occupancy, will not be lost upon his brother farmers in his neighborhood. Some may be slow in attempting any great change in their accustomed routine of farming, and paying out their money for improved farm stock, tools, &c., but sooner or later, they will obtain a "new set of ideas," in regard to agricultural improvement based upon improved farm stock, deeper plowing, higher manuring and better and more thorough and careful culture.

The other farm I visited was that of N. C. Cummings, Esq., and to satisfy you, Messrs. Editors, that he is a number-one farmer, I need only refer you to your subscription list, for there you will find he has been a paying subscriber to the Cultivator and Co. Gent, from the first number you published, down to the present time, without "break or interruption," and he says, during the time he has each year more than "got all his money back again," in the information derived from the pages of your publications.

His farm comprises some 200 acres; from forty to fifty acres of which is "high intervale"—that is, not overflowed by ordinary freshets. The soil is of a fine loamy texture, easily worked, and under his skillful management, very productive. He had dug sixty bushels of potatoes the day previous to my visit. They were as sound as a roach; the only fault they had was their enormous size. At least one-third of them were too large for the market or for table use—a fine white variety, the seed a year or two previous from Vermont. He is experimenting with different breeds of cattle, having some fine and large Devons from Hurlbutt, Conn., of his more recent importation. Durhams derived from some of the best Kentucky herds. Chester Co. Swine of the true blood, and Suffolks direct from Messrs. Stickney, Watertown, Mass. Sheep of the South-Down and Leicester—one of his South-Down bucks procured of Sidney G. Fisher, Philadelphia. He also has the true Bronze Colored Turkey—the gobler, with "turkey fixings," would furnish a thanksgiving dinner for a large neighborhood—Rouen ducks, Hubbard squashes, Marblehead cabbages, &c., &c. A knowledge of the "how and the where" of obtaining all of the above breeds of cattle, sheep, swine, fowls, &c., &c., was derived from the advertising columns of the Cultivator and Country Gentleman.

He had four acres of corn, somewhat injured by the cut worm; two and a half acres of potatoes, five acres of oats, corn fodder, beans, and various kinds of garden sauce, fruits, &c.

The farm house, barns, sheds and out-buildings, are large, convenient, and in good repair, all bespeaking the industry, energy and skill of a farmer whose progress is onward. Levi Bartlett. *Sept. 26th*, 1861.

[For the Country Gentleman and Cultivator.]

OATS ON SWARD LAND.

Messrs. Editors—Your correspondent W. from Utica, on page 209 Country Gentleman, inquires about growing oats upon sward land, to be followed with corn, in order to get rid of the grub which proves so destructive to the starting corn. Having for several years been annoyed by this pest to the corn crop on sward land, about ten or twelve years ago I changed my rotation by sowing to oats first after breaking the sward instead of corn, and with good success.

I plow in the fall with the double share plow ten to twelve inches deep; in the spring, early as possible, make it fine and mellow as possible with the two-horse cultivator; sow with oats two bushels to the acre; harrow and cross-harrow, and then roll down with a log-roller. I have never failed of getting a good crop—not less than 45 bushels to the acre, and have had as high as 67 bushels. If the crop is got in early, it will escape the rust; if late, it is very liable to a blight by rust. The first spring work I do after the soil is dry enough to work, is to get in the sward oats. It is very important that it should be done early; the crop will be heavier besides the advantage of escaping the rust. The soil I cultivate must be very similar to that of W., which he says is on the Mohawk flats, mine being upon the Connecticut flats. Now a word as to the depth of plowing. If W. has never plowed his land deeper than six inches, it is hardly necessary for me to say that he should not at once go more than two or three inches deeper should he be desirous by way of experiment to deepen the soil, for it would throw up too much of the new soil for the first crop. I think he might with advantage deepen two inches more the second plowing for his corn crop, and the like again the third plowing for a grain crop when seeding to grass.

These grain crops might not be any heavier the first time round by this increased depth of plowing; but it will hold longer in grass, and when it becomes expedient to take up the same field again, it is of decided advantage to have a soil rich and productive to the depth of twelve inches rather than half that depth. At least this has been my experience on the alluvions of the Connecticut. It will yield grass at the the rate of three tons to the acre for two years, and from one to two tons for four years more. No doubt the Mohawk flats will yield fine crops with a depth of five or six inches plowing, but in a long run it will pay to deepen that soil, rich as it naturally is, and were I the owner of any portion of it, much or little, I would try the experiment.

A soil that will turn up rich and black ten to twelve inches deep cannot otherwise than produce bountifully. When passing up and down the canal thirty years ago, on those pleasant packet boats that were then thronged with passengers, I remember well of feasting my eyes upon the broad expanse of the German flats upon the Mohawk, a sight, rich, beautiful and lovely in the extreme; a favored region is the Mohawk valley, and though the alluvions there are more extensive than here, it seemed to me from the similarity of the soil, the scenery, and the surroundings, that the Mohawk and the Connecticut were twin brothers. J. W. Colburn. *Springfield, Vt., Sept.* 30.

APPLES OF HIGH QUALITY.

"Will the Country Gentleman give me the names of the best half dozen apples for table use, of the finest and best quality, without regard to marketing. One for summer, two for fall, and three for winter? W. W."

The *Early Joe* is doubtless the one for summer—the Summer Rose is much earlier, and although very delicate, crisp and agreeable, is not equal to the Early Joe, and is rather too small to please many.

Among *autumn* sorts, the *Dyer* undoubtedly stands first—it is very rich and juicy, and at the same time, of delicate texture. For the other autumn sort cultivators would be divided between the Autumn Strawberry, Hawley, and Fameuse,—all of them very agreeable table apples, but not equal to the Dyer.

For *Winter* varieties, the Melon is the general favorite among a large number—the Pomme Grise is extremely delicate, almost like a pear, but small; while the Swaar, although less delicate, is nearly unequaled for richness. Some will be unwilling to omit the Red Canada, or Wagener, or Northern Spy, or Newtown Pippin.

A CHEAP AND GOOD COLD GRAPERY.

[Some time since, a correspondent requested a plan of a cold grapery, combining cheapness of structure, and economy of management, with success. Believing that many of our readers would be glad to see such a plan as would enable them to enjoy a good supply of fruit, scarcely liable to the disasters of seasons when raised under glass, our correspondent JOSIAH SALTER, of the firm of BISSELL & SALTER, Rochester, who has had extensive and successful experience, has kindly furnished at our request the following:]

Pray forgive my seeming delay in answering your favor of 26th August. My time has been very much occupied of late.

You say a correspondent inquires for "the best plan of building a cold grapery, so as to combine cheapness, economy and utility." I herewith give you a rough sketch showing how a neat, cheap, durable and effectual cold grapery may be built by any ingenious carpenter. It is a span roofed house 24 by 24 feet, which can, of course, be extended to any length, retaining the same width and height. A house built 24 feet wide, 48 feet long, 5 feet high at eaves, and 10 feet high at apex, makes a well proportioned and good looking cold grapery.

A house of these dimensions, viz: 24 by 24 feet, will take 11 red or white cedar posts, at least 8 feet long—5 on each side and 1 for the middle of the end *opposite* the door; 18 pieces 2 by 4 pine scantling, each 12 feet long, for water table, plate, ridge pole, &c.; 18 pieces 2 by 4 scantling each 14 feet long for rafters; 12 pieces 2 inch square and 12 feet long for perlins; about 100 sash bars 1 inch thick 1½ inch deep with ½ inch tongue for bedding the glass in, and each 14 feet long; a few pieces of casing and capping for ends and ridge pole; 1 piece 4 inch square for pillar in middle of house to support the ridge pole; about 150 feet match boards, and if the border is entirely *outside* the house about 48 feet 2 inch plank to keep up the earth of the border. Tin gutters at $5.00, cistern at $3.00, cast iron pump and watering can with rose spout; about 20 boxes of 7 by 9 Oneida extra thick glass at probably $2.00 per box, 50 feet in a box. Paint and putty, &c.

I think this house could be built complete, not including border and vines, for $150.

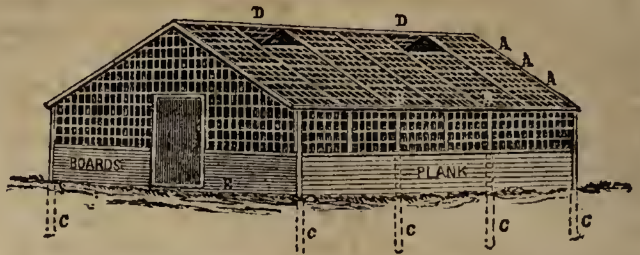
As good grapes, and of as fine quality, can be grown in this house as in the finest and most costly structure, and probably with more ease and certainty. This house will last, with a little repair, from 15 to 20 years, and produces 200 pounds of grapes yearly, worth fifty cents per pound. This is allowing a little less than 12 pounds to the rafter of 14 feet; a vine of this length will frequently give from 15 to 20, and even 25 pounds.

The *half* of this house, of course, would make a leanto, which should face the south; the whole a span-roof, which should run north and south, and face east and west.

You inquire, "What portion of a man's time, and for how much of the year, would be needed for its care?" The time needed for a house of this size would be merely nominal,—I should say one day in two weeks, from the 15th of April to 15th Nov., would be all that would be needed if it could be all put into whole days.

A good hand would do all the work of such a vinery in one hour a day, on an average, for weeks at a time; occasionally one whole day would be needed at thinning and pruning time. It is not the time taken, but the little attentions at all and at any time that may be required, and the knowing when and how and what to do, or the not knowing, which sometimes prevent or produce unfavorable results in graperies.

But pray let me discourage no one, for I know of no fruit so beautiful, so healthful, so luscious, and so pleasing to every one, that can be grown with so much ease and certainty, which may be cut fresh from the vine every day, in the acme of perfection, for so long a season as the grape. The grape may be had in perfection every day, from the same vinery, for five months in the year. I have cut my first Dutch Sweetwater on the 28th of July, and my last Prince Albert on the 15th Nov., from the same cold vinery, and kept the latter variety in a dry garret until Christmas.



A. A. A.—Perlins,—which may be sunk into the rafters one inch. The sash-bars nailed on the perlins, at proper distance for 7 by 9 glass.
B. B. B. B.—Rafters.
C. C. C. C.—Cedar Posts.
D. D.—Ventilators.
E.—Ground level.—The lower part marked matched boards is 2½ feet, boarded up—that marked plank is two feet, planked up for the earth of the border to rest against.

The glass at the sides and ends may be upright sash-bars only; no thick pieces needed; the bars will be abundantly strong.

Even more than this can be done with some of the later ripening and long-keeping kinds, by the assistance of a gentle warmth from a hot-water pipe, to expel damp and frost during Oct., Nov., Dec., and January.

Allow me to ask what other ripe fruit can be had in perfection for so long a season? It will take all the varieties of peach and plum, and nearly all the varieties of pears, and I was going to say, all the varieties of apples combined, to furnish so much ripe table fruit without intermission for so long a season. J. S.

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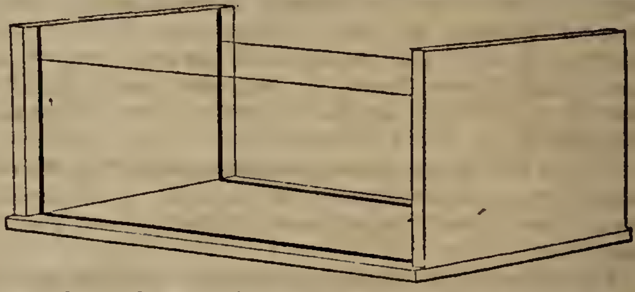
[For the Country Gentleman and Cultivator.]

THE AQUARIUM.

MESSRS. EDITORS—I notice in your last issue certain inquiries concerning aquaria from "W." As I have had some little experience in that line, I venture to submit it to your readers if you deem it sufficiently interesting to warrant its insertion in your valuable paper.

Last spring I took it into my head to get up a "tank," and set to work on my own hook, without suggestions, as I was not then aware that there was such a publication as that mentioned by your correspondent. My first move was to secure two of the largest panes of glass I could find of sufficient strength and clearness. These I took to a marble yard, and left orders to have three marble slabs cut and polished, with groves cut for inserting the glass. The whole thing cost me in the neighborhood of $8. When I got this far I found myself in the same trouble as "W." appears now to be in. The marble dealer gave me a package of *plaster of Paris*, but this I soon found was no go, and I called on him for something better. He then gave me some *water lime*. This answered very well for a while, and I thought I was all right, until one day I put in a little too much water, and it all fell to pieces. I was discouraged. Then I heard of H. D. Butler's work, and at once secured a copy, but was disappointed in it, as "W" has been. At last I wrote to a correspondent in New-York city, who visited one of the stores in that city where aquaria are a specialty, and for the sum of 75 cents procured me a box of cement styled "*E. D. Davis' Aquaria Cement*," which I applied, and have since found to answer perfectly, for, with the exception of a little mois-



ture around one of the cracks once, which a renewal of the cement speedily checked, I have had no trouble. The cement must, I find, be kept shut up close in the box, or it hardens and becomes useless.

It is wonderful what amusement one of these tanks afford. I got a common *fish leaf* plant out of a brook, placed it in a small sized flower pot, with some of its natural mud, and *drafted* all the shells in the house to form a mound around the flower pot. The fish seem to think it a capital abode, and are quite tame and sportive. I should mention that the *bow* of the glass should be placed *in*, so as to counteract the pressure of the water. "W.'s" best plan will be to send to Messrs. Davis & Greenwood, 480 Broadway, New-York, and procure a box of the above cement, although I have not tried it on wood, and do not know if it will answer for that purpose.

Geneva, N. Y., Sept. 16. RURICOLIST.

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[For the Country Gentleman and Cultivator.]

HARDY PLUMS.

Messrs. Tucker—In yours of Aug. 29, F. A. Colman asks, "which are the best six plums for his latitude." If Mr. C. is going to expend money in the purchase of plum trees, I hope his section of the country is more favorable to the growing of plums than it is here.

Seventeen years ago I procured a bundle of plum trees of Messrs. Breck & Co., Boston—six varieties. The trees were very fine, carefully taken up, and well packed. They grew well, and in due time blossomed. The first two years of their blossoming the curculio destroyed the fruit. The third year of their blooming, by jarring the trees two or three times each day for about two weeks, while the plums were in early growth, I succeeded in obtaining a large lot of plums; next year they again bloomed, but not so abundantly as in the previous year. By again jarring the trees and destroying the little Turk, I saved the fruit again, but in August the leaves on the trees began prematurely to drop off, and in a few weeks the trees were all nearly bare of leaves, the plums remaining—but they never ripened, and the trees never again put forth either leaves or blossoms; they were cut down as cumberers of the ground. Many others here have been alike unsuccessful in plum culture. The premature shedding of the leaves, the black wart, and the curculio, render all attempts to grow plums a precarious business in this section of the country.

Six or seven years ago, I received scions of two varieties of French prunes, imported by the Patent Office; most of the scions had turned brown, and were unfit for grafting, beside I had but little faith in their succeeding here, had they been in ever so good a condition. I had a few set upon the Canada plum; two or three of the scions grew finely, as did some distributed to my neighbors. Last year one of my trees produced abundantly, as did those of some other persons near my place. The plums are delicious when ripe, and have so little tendency to rot that they are easily dried, as we know by actual trial. The trees are hardy, standing the winter well, and as yet I have seen no "black wart" upon them. The tree that bore so heavy last year, again blossomed last spring, and now has upon it two or three dozen plums, larger than those of last year.

It is my impression that the "Prune d' Agen" will be found one of the best and most reliable plums we have; most of the scions of the prune here have been set in the Canada plum stock—the scion greatly outgrowing the stocks.

I have referred to the French Prune at this time, because in the Patent Office Report, 1854, it says—"among the cuttings of *fruit trees* which have been introduced, may be mentioned the "Prune d' Agen" and the "Prune St. Catharine," from France. They have both been extensively distributed, and grafted on the common plnm tree in all the states north of Pennsylvania, itself included, and on the mountainous districts of Maryland and Virginia. From the success which has attended this experiment, there is much reason to believe that there will soon be produced from these and other varieties from Europe, a sufficient quantity of *dried prunes*, in those regions, to supply the wants of the whole Union. The amount of this class of fruit annually imported into this country, according to official returns, is valued at $64,568."

I should be very much gratified to learn the good or bad success attending the prune scions so liberally distributed through the agency of the Patent Office, in different sections of the country. If they have succeeded elsewhere as well as here, it is proper that the *public* should be made aware of the fact, because it is a matter that said *public* have an interest in.

By the many *slaps* at the Agricultural Department of the Patent Office, I have noticed in the public journals within the past two or three years, one would naturally suppose the *concern* was the veritable Pandora's box. Solomon, Dr. Franklin, or some other wise and benevolent personage, has said "you should give the De'il his due." Justice and common honesty require that much. Now within the past fifteen years, by the kindness of members of Congress from this and other states, I have received a liberal supply of Patent Office seeds, cuttings, &c., &c.; and justice to that office, here impels me to say most of the seeds received have proved good in quality, and many of them new and valuable varieties; and it has afforded me much pleasure to distribute them or their proceeds. And now, Messrs. Editors, I have told my story; if others have received worthless seeds, they can tell theirs. Levi Bartlett.

Warner, N. H., Sept. 12th, 1861.

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LIME WATER TO PRESERVE EGGS.

"The best, and almost the only way to preserve eggs, is to put them in lime water. To make it efficient, the water must be as highly charged with lime as it will bear."

We cut this from a respectable exchange paper. Lime water is often highly recommended—but our own experience is, it is of little or no value. We have known most of the eggs to spoil in it, even if quite strong. The great essential requisite is to *place the eggs on end.* If this is observed, and they are placed in a cool room or cellar, they will keep well—whether in lime water, salt, sawdust, or ashes, or greased—if laid on their sides, the yolk will come in contact with the shell, and they will spoil in any case. It makes no difference which end is upwards. We knew two housekeepers dispute this point—one insisting that the small end should be up, and the other the large end—both were right, and both very successful. A good contrivance is a cupboard with shelves a few inches apart, bored full of holes, whose diameter is a fourth of an inch less than the egg—they will set end up in these holes, and be very easily placed in and removed. Salt is often recommended for packing them in, but it is liable to harden, so that the eggs cannot be removed without breaking.

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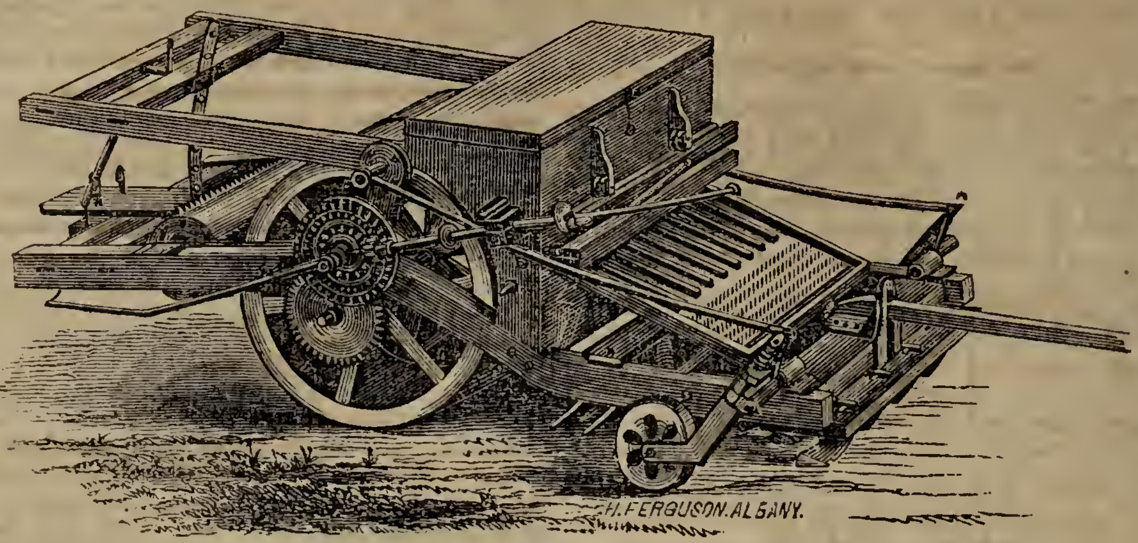
[For the Country Gentleman and Cultivator.]

Experiments with Varieties of Wheat.

Luther Tucker & Son—We have been experimenting on the different kinds of wheat for the last few years, and have settled down on the Soule or White, and Mediterranean, as the best varieties for us in this region. We tried last season about three acres of May wheat, and thought at the first of the season it would do well, and after weeding it that it would be our seed for next year's sowing. At harvest we found it was not what we wanted; the straw was soft, and the heads small. This fall we are sowing the White and Mediterranean, and if we can get the seed clean, think it the best. We have found an unusual amount of chess or cheat in all wheat this summer. We threshed about one hundred bushels for seed, out of which we took thirty bushes of cheat. Caleb Lee.

Allegany Co., Pa.


H. FERGUSON. ALBANY.

DUANE'S SOD SEEDER AND BROADCAST SOWING MACHINE.

The above cut shows this machine to very good advantage. It presents much that is new and very ingenious in its several parts, and altogether forms a combined cultivator, drill or broadcast sower, drag, roller and manure-distributor, in a single implement. To perform all these operations at once, if it can be satisfactorily accomplished, will not only save much time and labor to the large grain-farmer, but will also avoid a great part of the treading of the land by teams, and facilitate the putting in of the seed when the soil is in the best order for its reception. Among its more prominent features possessing the promise of utility as well as considerable novelty, are: the form of the cultivator teeth, to avoid obstructions and lessen the draught required; the power of sowing any kind of seed and regulating the quantity, by very simple but apparently effective contrivances; the position of the drag-teeth following, by which, it is claimed, they keep down at their work without being heavy enough to add materially to the draught; and the cylinder from which the plaster, bone-dust, or other fertilizer is distributed, with its vibratory movement to prevent their packing, or any failure to be regularly given out. The horses being in advance of the machine there is in fact no passing over the land after it is seeded; the seed falls close to the ground, so that a high wind will not affect its even distribution; the only labor for the farmer is to fill the seed-boxes and drive the team; if the field is an inverted sod, the sod is not disturbed; and finally, its whole work is said to be done without any more labor for the team than would be involved in a single plowing of the ground.

We have examined the model and the machine itself, and have no hesitation in commending it for the valuable features above alluded to, and others which we have not room to describe at length,—to the attention of all who farm on a scale of sufficient extent to render the purchase of such an implement a matter of economy. It is thought by Col. DUANE that it can be manufactured for about $150. It was tested with some care by a Committee appointed for the purpose at the Watertown State Fair, and upon a field which was not of the most favorable kind for its successful operation. We quote the report of this Committee at length:—

The Committee to whom was referred the newly invented implement for putting in crops, entered as a Sod-Seeder and Broadcast Sowing Machine, by John B. Duane of the city of Schenectady, report the following facts to the Executive Committee of the New-York State Agricultural Society.

The said implement was put in operation at the plow-grounds of the Society this day. A sufficient quantity of ground was plowed by order of the Society to test this instrument, and others if presented. We wish to state the fact that the ground was in an unfortunate condition for a fair trial of implements, as the soil was a hard baked clay, and broken into lumps. The inventor of the implement having full confidence in its working properties, entered on its trial, and the result seemed to justify it. The machine proposed to cultivate the ground, by a new from of cultivator-tooth; to sow any kind of grain; to cultivate or drag the seed in at the option of the farmer by simply turning a guide-board, or to do both combined; to sow clover and timothy seed; to roll the ground, and to sow the plaster, or any of the concentrated manures, all at one time, by once passing over the ground, and with one pair of horses, and but one attendant or driver, who rides behind the implement.

The seed selected was *Oats*, one of the most difficult seeds for machine sowing. After witnessing the operation of the machine for a sufficient length of time to satisfy us, we came to the following conclusion: That notwithstanding the condition of the ground it accomplished all the objects proposed for it, in the most successful manner; that is to say, the grain was perfectly covered, the ground over which it passed was thoroughly pulverized by the cultivator—a fine toothed drag—and the roller. The plaster was distributed behind the roller in free flow—the seed flowing down an inclined vibrating apron always in sight, and apparently free from choking. The draught was tested by the Dynamometer and was found to be about an average of four hundred pounds. This ease of draught seems to depend in a machine accomplishing so much, on two or three important considerations, viz: the cultivator teeth which are knife edged, and gradually lift the ground, not packing it forward as with the ordinary cultivator teeth; to the peculiar form of the drag teeth, and more essentially to its being balanced as evenly as possible on a central roller, leaving no work or bearing for the forward or castor-wheels to do, except for regulating the depth and easy turning of the machine, and which turns as easy as a cart.

In conclusion, we think the machine eminently practical as a new implement in farming, and recommend it to the consideration of the Executive Committee as an advanced step in labor saving implements.

All of which is respectfully submitted.

M. C. REMINGTON, } Committee
JAMES PARKER, } on the trial of
JOHN ADAMS, } Implements.

Watertown, Sept. 18, 1861.

An ounce of essence is worth a gallon of fluid. A wise saw is more valuable than a whole book, and a plain truth is better than an argument.—*Haliburton.*

Quoth Patrick of the Yankee—'Bedad if he was cast away on a desolate Island, he'd get up next mornin' an' go round selling maps to the inhabitants.'

PLANS OF HOUSES.

Among the many plans sent us, we have selected the two following, which appear worthy of being offered to our readers, and from which we trust they may derive some valuable hints. The first (fig. 1) is from a correspondent at Waltham, and exhibits the plan of a small dwelling, or one for a person of moderate means, and which may be built for ten or twelve hundred dollars. It is one and a half story, and cellar under the whole. A small porch may stand over the front door, or there may be merely a large broad hood over it. The plan will not need much explanation besides the references. A door under the higher part of the stairs opens from the entry into the kitchen; and thus access to every principal room is obtained from the entry. Two doors and two windows, placed on opposite sides of the kitchen, give plenty of light and air. The second story contains two bed-rooms over the parlor, and another over the sitting room. The space over the china closet and kitchen-jog is divided into two closets. If the kitchen is built as high as the rest of the house, as suggested, the chamber will afford two bed-rooms, requiring small separate stairs. The height of the first story is proposed to be 10 feet—9 feet would do for a house of moderate pretensions.

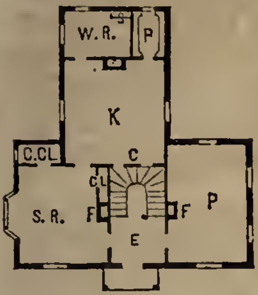


Fig. 1.—Small house—P, parlor, 12 by 19 feet—S R, sitting-room, 12 by 14—E, entry, 8 by 14—K, kitchen, 14 by 14—W R, wash-room, 9 by 9—P, pantry, 5 by 9—C. Cl., china closet—Cl., closets—C, cellar door—F, flues—S, sink.

The other plan (fig. 2) was sent by C. W. Spalding, from St. Louis, and represents a house which he intends to build, and the plan is offered for criticism. It is a very good one, but the one here engraved varies a little (as suggested) from the drawings sent. As furnished us the plan represented the pantry on one side, and the bath room on the other, as additional buildings set in the two corners formed by the kitchen and main body. We have included both in the kitchen wing, thus simplifying the building, and avoiding so many receding corners and projecting angles. In order to avoid the inconvenience or evil of making the pantry a passage way from the dining room to the kitchen, the shelves are all closed by panel doors, so as to form close shelves of every part, thus shutting out sight, dust, and all intruders. We have found this arrangement, from experience, to be an excellent one. This also excludes sight from one room to the other in a more perfect manner than by interposing a small entry, as in the plan sent, and it saves room besides. By taking 15 inches each from the pantry and bath room a passage may be made from the front hall to the kitchen if desired. We have likewise altered the position of the back stairs, so that they land near the centre of the kitchen chamber, and by wasting no space as entry, give three bed-rooms for hired men or domestics, instead of only two, as in our correspondent's plan, and save much circuitous travelling to get to them. The passage down cellar starts from under these stairs, but turns to the right, or under the bath room. The bath or dressing room is accessible both from the bed-room and back entry, and by a slide or small door from the kitchen. "This room is also designed," observes our correspondent, "for use as a gentleman's dressing room into which a friend or visitor can be taken without passing through other rooms in the house. In this room can be deposited overcoats and unbrellas in wet weather, and here would be kept clothes and shoe brushes, and other conveniences for making a gentleman's toilet, including, of coarse, a wash-stand.

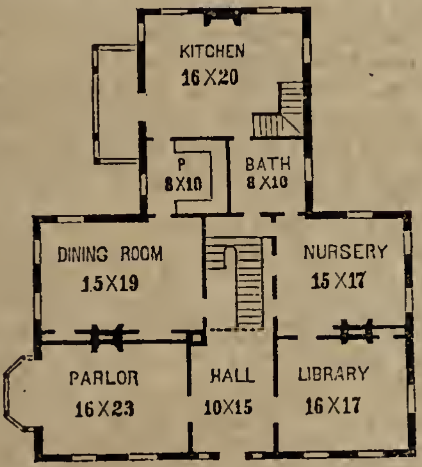


Fig. 2.

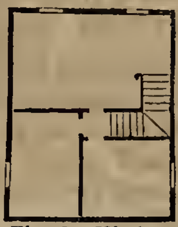


Fig. 3.—Kitchen Chamber.

"The space allotted to the chimneys should be two and a half feet; this will give depth to the closets adjoining the chimneys. You will observe that a flue is provided for a hall stove. If a furnace is used, this might be omitted. There is a partition with a broad arched opening or passage way dividing the hall from the principal staircase.

"In all the bed-rooms the windows have been so arranged as to provide a place for a dressing bureau *between two* windows, for the purpose of giving light from both directions."

These windows thus placed on each side of the bureau, are a convenience, but they destroy the exterior appearance of the dwelling by giving it a sort of cotton-factory air from their great number. Many will prefer but one window to a room on this account.

We are unable to furnish the plan of the second story, but may merely observe that it is quite similar to the first floor, in the main part, except in the large closets added to the bed-rooms made by taking off a few feet across the inner ends, and in placing the attic stairs over the front or entrance hall. The following additional quoted remarks serve further to explain the object—the *dressing closets* should not be forgotten, they are neat, convenient and valuable :—

"Several of the sleeping rooms are provided with closets of sufficient depth to serve as small side rooms for the purpose of receiving a wash-stand, so as to take this necessary convenience *out of the bed-room* and off the carpets. Room will be found under the attic stairs for a linen closet. An unfinished attic is designed in this plan, to be used in winter for drying clothes, and for storage, &c."

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[For the Country Gentleman and Cultivator.]

HOW TO PICKLE CUCUMBERS.

Editors Co. Gent.—A late number of your valuable paper contains a receipt for pickling cucumbers which is doubtless a good one; but as all housewives however "notable" each may be, have their own favorite methods of cooking, &c., I will give my mother's plan for having pickles always ready for use.

Cut the cumbers from the vines, wash them in cold water, and place them in an earthern jar. Put salt enough to make a strong brine into boiling water and pour on them; repeat this three successive mornings, and the fourth cover them with cold vinegar, adding a small quantity of mustard seed to prevent moulding. They will keep the whole year.

Clinton, 9 mo. 15. L. S. G.

[For the Country Gentleman and Cultivator.]

PIGS---THE RUNT, OR THE TITMAN.

"Oh, much abused and much despised beast!
Men slight thee most who know thy merits least;
Who would make LIGHT of thee, should TRY thee first;
Then, with thy praise, they'll inter-LARD their verse.
Without thy presence at the festive board,
Tickling the palate of creation's lord,
In bake, or fry, or even in a STEW,
Pray what could we, or our good housewives do?"
[J. C. Milne.

Those farmers who have been accustomed to raise pigs, doubtless know that it is not an uncommon occurrence for one pig of a litter to be very much smaller than the rest of them; and so far as my observations have extended, I believe that when a sow has a large litter, one of them will usually be a *titman*, or *runt;* and when the number of pigs exceeds the number of teats of the dam, every supernumerary pig will be a runt, and cannot be raised with the other pigs. It is a rare occurrence that there are two runts in a litter, although I remember of once seeing two in one litter; and in this instance the sow had two more pigs than teats. Of course, they survived but a short period of time. But the number of runts seldom exceeds one. In case, however, a sow has as many pigs as she has teats, *besides* the runt, it is always best to kill it at once, or give it to some one who is willing to endure the trouble of raising it by hand. But when there is a teat for it to suck, it will live, and grow with the others, but will usually be somewhat smaller than the rest.

Some men contend that every little pig will suck his own peculiar or respective teat, and no other; those that ought to suck the forward teats will always suck them, while the hindmost teats will always be sucked by those that are never allowed to suck any others. Some contend also, that the *best* pigs—not only the best for form and symmetry, but the best for *breeding*—will always suck the *forward* teats; and that although there may be no perceptible difference in all the pigs of an entire litter, from their birth until they are weaned, still those that suck the front or forward teats, are better blooded, and will transmit their good points to their progeny with more unerring certainty than any others of the litter; while those that suck the hindmost teats should never be kept for breeding purposes, as their progeny will be more liable to degenerate, especially when breeding in-and-in is allowed from year to year.

This theory was advocated to a certain extent, more than three hundred years ago, for we find in Thomas Tusser's Five Hundred Points of Husbandry, this couplet among his directions for the improvement of swine:

"Ungelt of the best, save a couple or more,
A sow pig and boar pig, that sucketh BEFORE."

I called at the residence of an extensive farmer in the county where I am now residing, whose sow had a large litter of very nice pigs, apparently about two weeks old. When I first saw them, they were all sucking, and there was just as many pigs, besides one runt, as there were teats of the dam. The runt was the most pitiable and forlorn looking apology for any animal of the genus Sus that I ever beheld. It was not as large as a rat of ordinary size, and was feeble, scurvy, and had hardly strength enough to move about, although it was making a great effort to find a teat above the other pigs. The proprietor was allowing it to live "in order to see what would become of a titman without a teat."

One would suppose that it might obtain enough milk to keep it thriving, when the others were not sucking. But as the sow has complete control over her milk, and will not "give down" unless in a recumbent attitude, the little fellow could steal barely enough to keep him alive. Humanity would dictate that it should be killed at once, as it cannot possibly survive long.

I am somewhat in doubt about the truth of the theory, that every pig sucks *always* its own peculiar teat. I have known it to be correct only in part; although as a general rule, I believe it is true, and that the "*titman*," or runt, always sucks the hindmost teats.

There is one fact, however, connected with this subject about which there is no uncertainty, which is, that a sow will not usually continue to give milk out of more teats than there are pigs to suck, allowing one to each teat. If a sow give milk for and suckle ten pigs, and the number of pigs be diminished even to one, or to any other number, she will usually give milk after a few days, out of only as many teats as there are pigs to suck. Therefore, if a sow be allowed to raise only one pig, it will be seen that there is but one teat that will afford milk; and if two good pigs and a runt be allowed to suck, the runt will almost always suck the teat *behind* those sucked by the other pigs.

I believe it is allowed, also, that a female titman will never have as many pigs at a litter as one that sucks before, or is not a runt or titman. S. Edwards Todd.

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[For the Country Gentleman and Cultivator.]

BEARDED vs. BALD WHEAT.

Editors Co. Gent.—In my remarks upon wheat in the Co. Gent. of Aug. 29, I stated that seven of the varieties I forwarded, "are White Bald Wheats." I have known of no other varieties of winter wheat being grown in this section of the country. I also forwarded three varieties of bearded wheat. These were grown only in small quantities in drills, as were some of the bald varieties. In describing Nos. 11 and 12, I gave it as my opinion that they were each, probably very productive sorts, and not so liable to injury from midge, birds, &c., as are the bald varieties. This opinion was formed from a careful examination of the various kinds during their growth, and in their yield when harvested. I do not reccollect of ever hearing or reading anything previously, in favor of bearded over bald wheats in respect to yield, or less liability to injure from rust, midge, birds, &c. But it seems that in Maryland, the farmers or planters give the bearded varieties of wheat the preference, and what is true there, may also be true elsewhere; at least it may be well for farmers to test the thing by actual and careful experiments. I am in hopes to satisfy myself in these matters another season, having sown a great number of sorts, *bearded* and *smooth* wheats.

Some over a year ago, I forwarded to Col. A. G. Boyd, Hancock, Md., samples of five varieties of winter wheat, which he sowed in Sept. 1860. A day or two after I forwarded my communication (dated 15th Aug.) I received a letter from Col. B., in which he says—"All the varieties of wheat sent me last fall, I observe, are smooth, (bald.) There is existing among our farmers a prejudice against smooth wheat, and I am beginning to be of the opinion that it is not without substantial reasons. Certain it is that our smooth varieties are more subject to the ravages of the fly and other insects, and to the elemental diseases incident to the wheat crop, and yield little or nothing, whilst the bearded varieties, with but few exceptions, escape the insect and these diseases, and yield remunerative crops."

In this section, both the bearded and bald varieties of spring sown wheat have been grown ever since I can remember. The bald sorts have been preferred by many farmers, upon account of their being more easily harvested, and not yielding so large an amount of chaff, beards, &c. But if by actual trial, the bearded is found to be the hardiest, most productive, and less liable to injury from insects, birds, &c., then it would seem more profitable to grow the bearded—notwithstanding its greater amount of chaff, long awns, &c.

Col. Boyd has given us his views upon this important question; will other wheat growers, in different sections of the country follow his example and give through the columns of the Country Gentleman, the result of their experience and observation? "To communicate and do good," is a duty devolving upon all—and more especially among that great brotherhood, the tillers of the soil.

Warner, N. H., Sept. 11th, 1861. LEVI BARTLETT.

[For the Country Gentleman and Cultivator.]

MOLE POWS.

EXPERIMENTS WITH, IN MADISON COUNTY, OHIO.

Believing, as I most assuredly do, in the doctrine of your "ditcher king," JOHN JOHNSTON, Esq., that *most* soils require some system of under-drainage to remove surplus water, and also believing that our "Madison Co. Mole Plow" drains are just as *effectual* and *lasting* as the more expensive "tile," in all soils of a clayey or compact subsoil; and also being firm in the belief that agriculturists of your and other States, only desire *proof* that these "mole drains" are just as effectual and desirable—much more economic—easier and quicker made, than any others, to induce them to adopt this system of drainage, I beg to offer a few *facts*, the result of experiments of some of our best farmers, assuring your readers that the statements as given may be relied upon as correct.

Citizens of our county have invented and patented within the past three to five years, some *seven* different machines of this class. We have also introduced from Illinois—previous to inventions here—some two or three others. We doubtless justly claim precedence over any other county for the *number* of machines of different invention of this class, and having had abundant evidence of their operations and merits, our intelligent farmers are well prepared to offer reliable testimony and results to other sections not equally favored.

And I offer as their testimony regarding to the mooted point, durability, that those drains *first* constructed, nearly *four years since*, have been constantly improving; discharging more regularly and freely than at first, instead of "filling up" as prophecied by many in the induction.

Permit me to give the experiments of two of our most reliable men.

W. WITHROW, Esq., of this county, has now in operation full 5,000 rods—say 16 miles—averaging in depth about 33 inches—one *single drain* nearly 125 rods in length, made nearly *three years since*, which discharges freely—constructed a part of his drains in winter, remainder in spring and fall.

Mr. W. considers a fair day's work for two men and pair of horses, 100 rods, and that the cost does not exceed *five cents per rod.* He uses an improved machine, having a guage to regulate depth, and which also enables the operator to determine at a glance the *exact* depth of plow—also an additional improvement of a "capstan hoister," to raise plow out of ground by means of wheel and lever, instead of pulling same out by team, requiring a less amount of force, by *one-half*, to raise it, and move forward. The plow, complete, costs $150, at shop.

But the largest experiment made in this county, and perhaps in State, has been by R. ARMSTRONG, Esq. He uses the "Marcus and Emerson" Illinois plow. Mr. A.'s farm consists of some 1,250 acres, mostly low, level, black loamy soil, with of course but little fall. The drains lead into a stream on one side of farm, and through centre into large open ditches—previously cut by hand. He begun over three and a half years since—has made this year over 2,000 rods, and previous to this some 6,000 to 7,000 rods, or say full thirty miles. The *first* drain—cut nearly *four* years since, was about three-fourths of a mile, winding through lowest parts of prairie, and passing through a small knoll—discharges freely at both ends. His drains average a depth of some three and a half feet, none being under thirty inches—uses a pair of horses to wind up "cable-rope," and oxen to "pull out" and forward capstan—has made this year 160 rods per day, but considers 100 rods an average day's work.

An item in his drainage, shows that these drains are "very tenacious of life"—to use a *forcible* expression.

The first drain was a long one with but little fall; afterwards he concluded to adopt a different outlet, and cut some eight or ten drains at right angles to first, passing directly across first. Such must have been the fact, as all were run at an even depth.

The *first* long drain was considered spoiled, but in a short time begun to discharge, and has increased in volume, until now it runs freely and almost constantly.

Mr. A. considers cost but little, if any, higher per rod, than the estimate of Mr. W., above stated.

Now we claim that these mole drains, lasting thus long—from three to four years—will continue to remain as at present. We invite Mr. Johnston and others to show reason, if any they have to offer, why our assumption is not correct. We have seen them examined at outlet after being made some months and years, and have always found the *top* and *sides* as solid and firm as when made—no signs of crumbling or falling in.

We of Madison also claim for these drains some advantages *over* tile:

1st. They are more easily and cheaply made.

2d. Can be constructed at any time, when ground is not frozen hard.

3d. They permit water to enter, from top, bottom and sides, freely.

4th. They can be renewed—if by chance stopped up or deranged from craw fish or other causes, without taking up, as with tile.

5th. And to close reasons—though others are obvious and might be offered—thorough and efficient drainage is within the immediate *reach* and *means* of all clay subsoil farmers.

While we admit the "tile drainage" as preferable, in many, and perhaps *all* cases, if it could be constructed as easily and cheaply as "mole," the matter of *cost* is now, and must ever be, so great as to debar the farmers of small capital and energy from ever venturing upon the experiment, and of course from receiving the admitted beneficial results of a thoroughly underdrained farm.

It may be more judicious, in the long run—but I much question even this—for the farmer of abundant capital to use "tile" for drains; but to all others—possessing subsoils permitting its use—the "mole plow" will be found the *desideratum*, and this latter class need no longer hesitate to adopt the "Mole Plow," on the score of durability, as we of "the West," have well assured ourselves that this is not a doubtful, but a *fixed fact.*

I am assured that drains in Illinois are now in successful operation, constructed *ten* to *twelve* years since.

If from this lengthy communication, any of your intelligent readers are induced to discard "theory" and adopt "practice" in the use of "the Mole Plow," I feel assured they will reap beneficial results, and I shall not have written for nought. "W."

Hickory Grove, London, Madison Co., Ohio.

IMPACTION OF THE CROP IN FOWLS.

Our domestic fowls are very liable to an enormous distension of the crop by food which, in the absence of secretion, and from the quantity accumulated, becomes hard and incapable of being moved from the distended cavity. The fowl lingers on without appetite, and manifesting great dulness, torpor, and progressive emaciation. Death soon puts an end to the case, and then alone, in the majority of instances, the enormous crop indicates the nature of the fatal malady.

Treatment.—In mild cases, this consists in pouring tepid water in the gullet, and manipulating the crop so as to soften its contents and press them back through the mouth or onwards into the stomach. In severe cases, no hesitation should be experienced in making a bold incision, evacuating the crop, and drawing the lips of the wound together by silver wire suture. The fowl must then be fed for a few days on materials which do not need to lodge in the crop, in order to be prepared for the action of the guzzard, and well broken down meat with sloppy bread and milk, are the best forms of food for it.—*Prof. Gamgee.*

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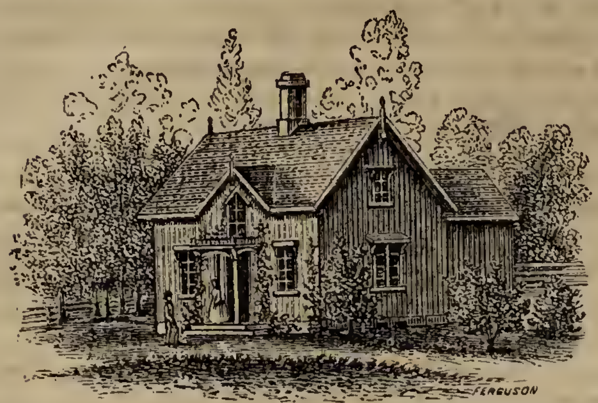
MARKETING POTATOES.—Solon Robinson says that farmers would save one-fourth of their price by separating the large from the small before sending them to market, the small potatoes only fill up the interstices and lessen the value of the whole, while when separated, the large ones bring a better price and the small ones left are of considerable value.



Design for a Working-Man's Cottage.

A design is here presented of one of the larger and more complete workingmen's cottages, or which may be built as a cheap farm house for a small family, where some taste of exterior is an object, (fig. 1.) The points in which it excels some of the larger plans already given, are the entries for both front and rear door, a wing furnishing pantry and wood-house, and a portico, which is surmounted with a small balcony, entered from the upper passage through the glass door. There is also a large amount of closet room up stairs, in which may be neatly packed away much of the material that is commonly thrown promiscuously in garrets; while the rougher articles of this class may go to the wood-house chamber. By making the wood-house a little longer, a greater length may be given to the pantry, and the back entry may then be made large enough to receive the cooking-stove in the heat of mid-summer, the smoke being carried up into a brick chimney built for this purpose. This chimney need be carried up to but a moderate height above the roof if surmounted with the cap represented by fig 4.

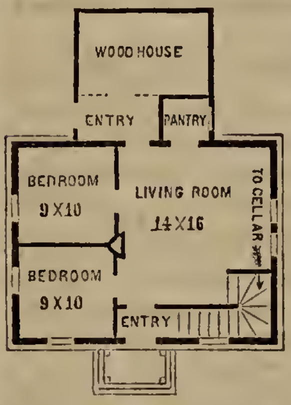


Fig. 2.—Principal Floor.

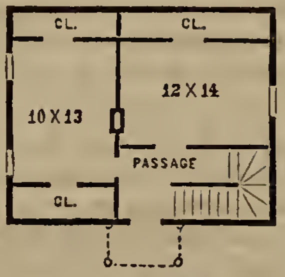


Fig. 3.—Chamber.

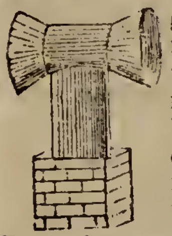


Fig. 4.—Chimney.

This design is remarkable for its compactness of arrangement. The front entry is smaller than would be practicable, but for the room given in the stairway. The lower portion of the stairs being under the lowest part of the roof, do not occupy valuable chamber room. The same economy of space is observed in the places assigned to the upper closets. The single chimney may be made to warm every room. The front bed-room may be made, if desired, to open into the front entry, instead of into the living-room. It will be an advantage which many may deem valuable, that the two rooms above mentioned may open either into the living-room or out of doors by the front and rear entry.

The cost of this house, well built of wood, with a cellar under the whole, would be six or seven hundred dollars—but by finer material, slight enlargement of the rooms, and better finish, it would cost a thousand.—*Tucker & Sons' Illustrated Annual Register.*

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Plaster and Manure.—"If," says a writer in Field Notes, "a farmer neglects stable and yard manures, and attempts to make up the deficiency by the use of plaster, the latter will soon fail him, for this mysterious mineral needs vegetable remains in the soil to enable it to act efficiently. In other words, it only helps a soil that is able to help itself."

Strawberries---Cheapest Mode of Raising.

We remarked many years ago, to the surprise of some hearers, that as many bushels of strawberries could be raised on an acre as potatoes; and that they could be furnished ready to pick at a cost of not over 25 cents per bushel. Wilson's strawberry has been raised on two-thirds of an acre, at the rate of 400 bushels per acre—200 are more frequently accomplished. But few crops of potatoes come up to this. The yearly labor for a 200 bushel crop need not be $50.

There are many ways of raising strawberries. A common one is to set out the plants a few inches apart, which renders the labor many times more than is needed, one by three feet being near enough; they are perhaps kept clean until they have borne one crop; and then runners soon cover the surface, variously mixed up with grass and weeds. In two or three years, the owner concludes that he has "bad luck"—or that strawberries "cost more than they come to;" or that "they are a humbug."

We have examined various modes, and are satisfied that the cheapest and best for field culture, where land is not very costly, is the *alternate system*—or planting this year, and cropping next,—thus obtaining five acres of the berries from ten acres of land devoted to the fruit. Every strawberry-raiser knows that when clean and continued hill-cultivation is given, that *one* crop is always larger than the rest, which is the second year. The plan here proposed is to have no other than this largest crop.

First, prepare the land perfectly; that is, have it fine, sufficiently rich, and especially and indispensably, have it clear of all foul weeds and their seeds. This should be as early in spring as practicable. Then proceed to plant by a long well stretched line—put the plants in with a dib, such as nurserymen use for root-grafts—they may be thus planted with great rapidity; an active man will plant out 5,000 a day—perhaps more. If the rows are four feet apart, and placed 20 inches or two feet apart in the row, there will be about 6 or 7,000 plants to an acre; that is, two men will plant ten acres in less than a week. Now, observe how much easier this is, than to cultivate and hoe, and hand-weed ten acres of strawberry plants of two or three years standing.

The first year, cultivate them frequently with a horse. If the land is clean, according to one of the requisites, they will need but little hoeing, and the runners will have filled up all the desired space in the rows. They are now ready for a heavy crop next year.

After bearing, the weeds would begin to increase rapidly. This is obviated by simply plowing in the whole plantation.* If the same land is intended for another crop, manure it properly with compost, as the soil may require, and prepare it by mellow cultivation for planting the following spring. Two fields, or two portions of the same field, will thus keep up a regular supply by alternately planting half each spring. Twenty acres devoted to strawberries would thus give ten acres of berries every summer; and if productive sorts are selected, such for example as the Wilson, the ten acres would yield two thousand bushels. If worth five cents a quart on the plants, the whole yearly amount would be three thousand dollars from the twenty acres.

It is probable that the one heavy crop would be nearly twice as great as the average of several crops on a plantation continued several years; and if so, about as much would be obtained in this way from the twenty acres, as if the whole were kept bearing. The cost of planting, as already shown, would be not over ten dollars yearly; the cultivation by plowing up the whole surface, would be many times easier than horse and hand-weeding.

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* Reserving enough for planting.

The actual cost, before picking, would be about as follows:—

Interest on 20 acres,	$100
Annual planting,	10
Do. plowing, harrowing, &c.,	25
Do. manuring, (may vary greatly,) say,	100
Do. cultivating the rows, say,	20
	$255

Six mills a quart (20 cents per bushel) would more than pay all this expense, if 150 bushels were obtained from an acre. If any of these figures are wrong, they may be corrected by any one to his own satisfaction, *if he has tried this mode of culture*, and is not acquainted with the weedy slip-shod method only.

FARMING IN WAYNE COUNTY, INDIANA.

Brief Editorial Notes.

Making Sorghum Molasses.—The country surrounding Richmond is one of the finest and best cultivated portions of the West. In external appearance—in woods and fields, dwellings and outbuildings,—it would be scarcely distinguished from the more level parts of Western New-York—the fields of tall corn, being the first point of difference that a stranger would observe. The soil is very fertile and almost wholly free from stones. The forests consist largely of oak, beech, and maple, and at the present time are brilliantly variegated with the rich crimson foliage of the sour gum and the softer shades of ash, maple, and tulip tree. The leaves of the corn were killed on the 28th with frost—a part is topped and a part cut up at the roots. It is the most important crop, and the average product is greater than in New-York—or about fifty bushels of shelled corn per acre, sixty to seventy among the better farmers, and one hundred and thirty have been raised. Wheat is hardly as productive as with us—oats about the same. The usual rotation is corn, oats, wheat, grass. The manure made by animals is applied to the corn. It is not unusual to sow wheat among standing corn, and to cover it by running the shovel-plow between the rows, leaving the surface rough or ridged, but the best crops are not obtained in this way. Weeds generally are extirpated, and farms present a neat appearance. A few cornfields were observed as clean as a floor. Land is from sixty to one hundred dollars per acre, within two or three miles of Richmond.

A more general cultivation of the clover crop, for improving the quality of the soil, would add much to the profits of farming in the long run.

The forests present a heavy growth of good timber. A hundred cords per acre are not unusual.

I have visited a few manufactories of *Sorghum molasses*, conducted on a moderate scale. One of these employed three hands and one horse, and would make about 25 gallons in a day. Two horses would have made more. The stream of juice from the grinding-mill was about half an inch in diameter, and was of a light pea-green color, from the amount of small fibrous and other foreign matter derived from the stalks. The rollers were metal, and pressed the stalks so closely that they passed off nearly dry and like shavings. Cattle were eating a portion of this refuse matter. The fresh juice was boiled down in shallow pans. No substance was added—the molasses being simply boiled juice, well skimmed during the process. From one to two hours were consumed in thus changing the juice to molasses; the skimming being continued throughout. The scum is green, and consists of the fibrous and other matter already mentioned. One cord of wood makes one hundred gallons of molasses, and the whole process, after the stripped stalks are drawn to the mill, is performed for 20 to 25 cents per gallon. The wholesale price here is 50 cents per gallon—an acre will average about 200 gallons, and consequently will yield 40 dollars or more for the labor and expense of raising and harvesting,—the cost of the latter, including the previous stripping of the leaves, being the principal part, and about three times as great as harvesting common cornstalks. The value of the leaves for fodder does not pay the expense of stripping them off.

Another manufactory, belonging to A. Mendenhall, was of a cheaper character, being merely intended for his own private use. The rollers were of wood, turned accurately, and working with iron gudgeons, and having iron cogs on the ends of the rollers, to give the proper motion. The rollers are set vertically, as usual. The cost of this grinding apparatus, which is worked by two horses, was about 20 dollars. It grinds two or three cords a day. It does not press the juice out so closely as those with metal rollers, about one-fifth being left with the stalks, but it is purer, and has less of the green matter. As a consequence, less skimming is needed, and the whole process is completed in half an hour. As all are aware, the juice should be boiled when fresh—a few hours are sufficient to cause fermentation. The pans are home-made, and consist simply of sheet-iron with plank sides, the sheet-iron being bent up so as to form the ends of the pan, and are secured to the plank by two thick rows of nails—the fire-place is a little narrower than the pans. A cord of wood boils down the juice for 80 gallons of molasses. Last year, six gallons of juice produced a gallon of molasses—this year it is not quite so rich, and eight or ten are required. Sorghum which grows on dry and poor land, although smaller in crop, yields a richer and better juice—in some instances twice as valuable as that obtained from the more succulent stalks on moist and rich ground.

Much of the sorghum raised this year has been diminished in value by allowing the seed through carelessness to become mixed with broom-corn.

The molasses has a distinct flavor, unlike both maple and cane molasses, better than the latter, and inferior to the former, but much liked by those who have become accustomed to it. But little, so far as I could learn, is offered for sale in market, farmers generally making it for their own home use. *Richmond, Ind.*, 10 *mo.* 8, 1861.

THE SILVER POPLAR

There are some owners of large ornamental grounds, that value this tree for its rich and silvery foliage, its extreme hardiness and vigor of growth on almost any soil, and for the short time required to obtain trees of large size; yet are obliged to reject it on account of its intolerable suckering. They wish to know if there is any way to avoid this difficulty.

We are informed that by digging up (not cutting off, as is the common practice) all the suckers a few times, they cease to reappear, if the work is well and thoroughly done. Will those who may try this remedy please report results?

EDITORIAL FAIR NOTES.

Westchester Co., Oct. 4.

On Wednesday I had the pleasure of attending the Hampden County (Mass.) Exhibition at Springfield. Unfortunately (for me) the show of Live Stock, with the exception of Horses, had concluded with the first day, (Tuesday,) so that for my knowledge of that part of the Fair, I have to depend upon others. The turn-out of Cattle appears to have been quite good—including Devons from H. M. Sessions of Wilbraham, Short-Horns from Phineas Stedman of Chicopee, and Ayrshires from Wm. Birnie of Springfield, and C. L. Buell of Ludlow. According to the statements of the Springfield Republican, "the Short-Horns predominated, as usual, 'only more so,' among the neat stock," verifying the statements I have before heard as to the growing popularity of this breed in the Connecticut Valley:—"It is twenty-five years," says that journal, "since Horatio Sargeant of this city, brought the first full blood Short-Horn bull into Hampden county; but it is only six years ago that Phineas Stedman introduced the first pure Short-Horn pair into the county, and now there are twenty owners of pure stock of that description, and over 100 unadulterated animals, within the limits of the county. Conspicuous among the Westfield Fat Cattle was a pair of four-year olds of Geo. S. Taylor's, weighing 4,500 pounds, the largest of them probably the finest animal of his years ever exhibited in the county, and also three pairs of Hezekiah Taylor, only three weeks ago bought by him in Middlefield."

The Show of Horses on Wednesday was quite a good one, including among other items a tandem team, in which a stallion was between the shafts, with his mother as the leader, and five or six of his get attached abreast, so as to make a very good exhibit both of sire and offspring. But the indoor departments of the show, which filled the City Hall, presented perhaps the most attractive feature of the whole; the Hall is an extraordinarily fine one, and the entries there included the following:—"Flowers 16, fruits 82, vegetables 75, household manufactures 31, worsted and fancy work, millinary, &c., 141, fine arts 44, bread 16, butter 7, cheese 7, mechanic arts and agricultural implements 67, grass seed 16, musical instruments 9." This exhibition, although not as full, I believe, as has sometimes been the case, was in many respects very good, and I can endorse the following remarks from the Republican:

> Mr. Richard Bagg and Michael Dorne, neighbors and rival gardeners, of West Springfield, each made splendid exhibitions of vegetables, one entering 50 and the other 60 varieties. Of out-door grapes, Rev. Dr. Ide presented seven varieties, and the largest collection, and is strongly backed by John B. Stebbins; while of foreign hot-house grapes, H. J. Chapin (Massasoit farm,) and William Birnie made splendid displays, that of the former including six different varieties. In pears, Dr. Ide, Dr. Breck, (medicine treads closely on theology,) B. K. Bliss, Alden Hitchcock and James E. Russell of Springfield, and N. D. Parks of Russell, present numerous and excellent varieties. William R. Sessions of Wilbraham, had 40 varieties of apples; William H. Lyman of the same place, 13, and D. B. Merrick, as usual, a large display; and Col. Aaron Bagg of West Springfield, presents 20 varieties of fruit, mostly of apples and pears. Roger S. Moore of this city, shows a basket of fine apples, a specimen of 12 bushels from one tree—a brag crop for 1861. Cranberries and cranberry cherries are in unusual and cheering proportion, and potatoes are plenty and big enough to freshen up the Irish emigration.

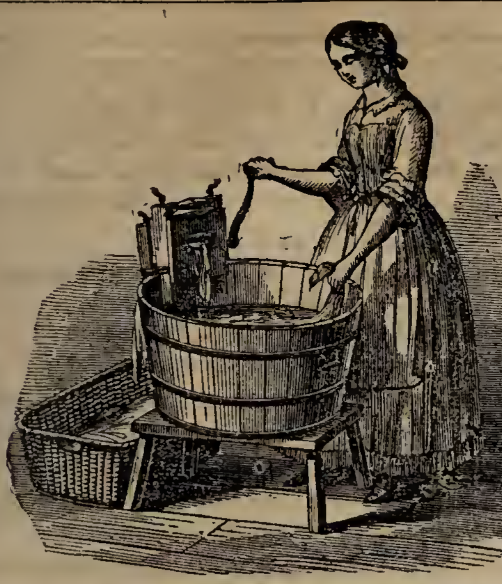
To the above I should add that I have never seen finer platters of Delawares than those presented by Dr. Ide and Mr. Stebbins, while the apples and pears were much more numerous than I expected to find them the present season. The vegetables were fine, as above stated, and our friend B. K. Bliss, in addition to many other valuable contributions, showed a very large assortment of potatoes.

At two o'clock the usual Dinner took place at the Massasoit, at which interesting and instructive remarks were made by Gov. Andrew, Hon. Marshall P. Wilder, Rev. Dr. Hitchcock, Dr. Geo. B. Loring, &c. The Governor touched upon the associations of farm life and the patriotism of farmers; Mr. Wilder and Dr. Hitchcock upon Agricultural Education, and Dr. Loring related his experience in bringing a five hundred acre farm from exhausted-ness to fertility, with many anecdotes to enliven the tale. The hours passed by very pleasantly; there were seats for 150 at the tables, most of which were filled.

My thanks are due to President Chapin and other Officers of the Society, and many friends, for their kind greeting and attentions. I had a pleasant drive with Mr. Birnie, which I shall endeavor to report upon hereafter.

— Thursday I reached Flushing, arriving while the Queens County Fair was midway in progress—its indefatigable Secretary, John Harold, Esq., by the same system and promptitude which characterize his arrangements as General Superintendent at our State Fairs, contriving to condense his County Exhibition wholly into *one day*. The address was put down for 12 o'clock, and coming in just at that time I accordingly found the officers on their way to the mammoth tent in which it was delivered, to carry out punctually the programme of the hour. This tent—140 feet by 75—was beautifully decorated, and sheltered an excellent display of fruit, flowers, vegetables, etc. Outside we had a ring active with the competition of well filled classes of Horses, including several celebrities, as well as many valuable animals from the ranks of private life; not very large Cattle and Sheep Departments, a considerable variety of Poultry, and some very good Swine, together with a good assortment of Implements. Mr. Ayerigg of New-Jersey was present with a large part of the stock shown by him at our late State Fair, but otherwise I think the exhibition was almost wholly made up in the County itself. And its character—as a whole—was not less creditable to the farms and gardens of the locality, than the large concourse of people present, was to the intelligence and enterprise of those who cultivate them. I regret that time will not permit that I should particularize at greater length. Few county exhibitions that I have seen were such as to do greater honor to the Societies holding them. There is much of interest to the stranger—particularly in Horticulture — to be seen at Flushing, of which I shall hope to chronicle some account when fortune may favor me with the opportunity of another visit. Mr. Mead of the Horticulturist, and Mr. Judd of the Agriculturist, were among the busiest of the spectators; Ex-Gov. King and Hon. E. A. Lawrence, ex-presidents of the Society, Col. Johnson of Albany, and other prominent gentlemen were present, and the Address by R. C. McCormick, Jr., was such as to interest all who were within hearing of his voice.

Leaving Flushing with E. G. Faile, Esq., of West Farms, I came here with him the same afternoon, and have been spending to-day in quite a drive through the county, both pleasantly and instructively to myself. The necessity of mailing these hurried notes at once, in order to be in season for the next Co. Gent., must, unfortunately, preclude the farther extension of them at present. L. H. T.



"The Universal Clothes Wringer."

The above engraving exhibits a Clothes Wringer which we have had in our laundry for five or six weeks past, to the great relief and satisfaction of the family. It saves a vast deal of severe labor, and with it and our washing machine—(Wiswall's patent, made by N. B. Cady, West Randolph, Vt.,)—"washing day" has been relieved of most of its terrors. The "Universal Clothes Wringer" is thoroughly made and neatly finished—clasps firmly to the tub, as the cut shows. The rolls, (India rubber,) can be adjusted to admit the passing through of anything from a collar to a bed quilt. Set it properly for a sheet, and it will wring anything down to a collar with altering the screws. It is made by the Metropolitan Washing Machine Co., at Middlefield, Conn., M. W. Terrill, Esq., President.

Fruit Growers' Society of Western New-York.

The autumnal meeting of this Society was held at Rochester, commencing on the 1st of October—E. MOODY, President of the Society, in the chair. There was a fine collection of Grapes, and some of the newer Pears on exhibition. A committee was appointed to report subjects for discussion, and while they were out the merits of the Virgalieu Pear, as an orchard fruit for Western New-York, were considered.

Varieties and Culture of the Grape.

QUESTION 1.—What varieties of grape can be relied upon to ripen their fruit with certainty in Western New-York, in the open air?

P. Barry—We have been for several years testing new varieties of grapes. Many old ones are found not to ripen—the Catawba will not ripen in this latitude. This season has been very unfavorable for the ripening of grapes. The Delaware he considered would ripen well in all seasons—has ripened well this season, when nearly all others failed. The Hartford Prolific will always ripen well. The fruit, though of the second quality, is still a *pretty good* grape, and many will call it *good enough.* These two he would mention as being about the best he could name.

Dr. Miner of Honeyoye Falls, had ripened nearly the whole crop of Dianas uniformly for the past 5 or 6 years—was two or three weeks earlier than the Isabella. There is not over a week's difference between the Delaware and Diana.

H. E. Hooker thought the Diana did not ripen uniformly enough to be placed upon the list; there were generally some unripe grapes upon the bunch. With the Delaware there are no unripe grapes. With him he found the Delaware did so well that he had but little inclination to talk of anything else; he counted this morning on a trellis of 12 feet in length, over 200 bunches, and if it lacked in size, it made it up in quantity. Would give his unqualified recommendation; it was hardy and every way desirable. Hartford Prolific was good and early, but of second quality. The Concord he would recommend as being good and early enough for the climate. These three he would recommend as very hardy and early.

P. Barry some four years ago planted the Rebecca, Delaware, Concord, and Diana, upon the same trellis, and under the same circumstances. The first three are well ripened; the Diana is not ripe yet. He thought the Delaware a month earlier than the Diana.

Mr. Hoag of Lockport, had about 600 vines, which fruited the first time this year, on an as exposed a situation as any in the county. The varieties are Hartford Prolific, Concord, Diana, Perkins, Garagues, and To Kalon. The order of ripening was as follows:

The Hartford Prolific first—has cut about 1,000 lbs.—sold in New-York for 11 cents a pound; had no trouble about gathering on account of the fruit dropping. The Perkins ripened next; the vines loaded down with fruit—many considered the quality superior to the Hartford Prolific. The Concord has not grown as well as some of the other sorts; they are ripe, and have been for a week. The Garagues are nearly ripe. The To Kalons are nearly ripe, and are quite dark. He noticed that the To Kalon trained up to a trellis, did not kill back at all, though the Diana was killed back to the ground. Would recommend the Rebecca for home consumption, but not for general cultivation. Considers the Perkins a fine grape. Has one Delaware which has over 200 clusters on a space 4 by 8, four years planted. His Delawares are nearly all ripened.

Mr. Frost of Rochester—Has several varieties grown under the same circumstances. Hartford Prolific ripened several weeks ago and are nearly gone—Delaware is about ripe; Concord not quite ripe. Can depend upon, first, the Hartford Prolific, then the Delaware which is fully as productive as any other sort.

Mr. Townsend of Lockport, exhibited some bunches of Perkin's Grape, considerably resembling fine Dianas. They are early—rank next the Delaware in quality—fruit of uniform size.

C. W. Bissell of Rochester—Have had the Logan ripe 4 weeks since—fruit better than the Isabella—2 weeks earlier than Delaware—foliage did not burn much.

C. Downing of Newburgh—With me the foliage burns considerably.

Mr. Gamper of Penn., says he obtained some from Rochester, and found it the hardiest of any he has.

Mr. Bissell, in answer to several members who called upon him as to the Logan grapevine, replied that the Logan, in every instance where the vines had blossomed, had fully ripened its fruit in September in the open air. A very great advantage which this Logan vine possesses is, that as fast as the wood attains its full size during the summer, it also ripens perfectly, and is thus far prepared to perfectly withstand our New-York winters, and consequently to need no protection. It is best cultivated when trained to stakes, or else upon the "double spurred system" of pruning, and it thus bears profusely, and is certain to ripen its fruit with us in the open vineyard. The main thing in the cultivation is to get a good growth, and thus have a plenty of ripe wood each year, and you are sure of a good crop of grapes next year, ripened in September.—(*To be continued.*)

DEEP PLOWING.—A recent English writer makes the following sensible remarks on deep culture:—"That land may be injured by deep culture is a common but a very erroneous opinion. Plowing down good earth and up bad, and letting them remain in that position, must lessen fertility for a time, but that is not deep culture; it is literally exchanging good earth for bad, and is the reason why individuals declare that they have injured their land by deep plowing. Let the nature of the land be what it may, it can be raised to its greatest fertility only by a sufficiently deep pulverization and mixture of the ingredients. Where the subsoil is of good quality, and in many places it is better than the soil, bring it up at once to the surface. Where deep culture is judiciously executed, in no case does the new earth lessen or destroy the fertility of the old; on the contrary, they improve each other, & constitute a deeper and more productive soil.

Inquiries and Answers.

Inquiries.—1st. Does buckwheat injure land, if so, why?—2d. Do oats impoverish land, if so, why?—3d. Will birds carry foul seeds, such as thistle, carrot, and wild onion?—4th. Does peeling bark make less ashes?—5th. Which kind of oak is the best for bark for tanning purposes?—6th. Are seasoned posts more durable than green ones? v. [Our correspondent is aware that all grain crops exhaust land more or less—buckwheat moderately, and oats rather severely. We cannot give a distinct and specific reason, satisfactory to all. The vitality of the seeds mentioned would doubtless be destroyed when devoured by most birds. The bark of the oak produces more ashes than the wood, but a greater portion is insoluble—the difference in the value of the ashes is probably not great. Seasoned posts are more durable than green ones, especially if they have been cut in summer when the seasoning process is quickly performed. Posts set green are so long in drying, that partial decay or fermentation takes place before they can become dry, in the same way that winter-cut timber retains water so long as to produce a similar result. Seasoned posts, set over a drain, with clear gravel rammed about them to let down speedily the water that falls, will always remain dry, and will last very long.]

Stocking Artificial Ponds.—I wish information in stocking an artificial pond with fish for table use. Can you, or some of your many readers, advise me as to what kind or kinds to use, and how I should go about it? My pond has no running water. I have been told that in putting in several kinds they often prey upon one another. Should I not introduce some small fish which increase rapidly for food for the larger? My pond will contain something more than a quarter of an acre, and will be from 1 to 12 or more feet in depth. R. W. H. *Moorefield, Ky.* [We shall be pleased to hear from some of our readers, who have had experience in the business, in reply to the above.]

Sows Eating Their Pigs.—If "N. E of Ohio," (Co. Gent. Oct. 3, p. 224,) had stated the treatment of his sows; whether they are confined in pens or run at large, and the food they receive, we could more certainly give a remedy for their unnatural voracity. Sows never eat their pigs when running at large with plenty of green food, but if confined and fed mostly on grain, they suffer severely from costiveness, and are apt to destroy their young on littering. If they must be confined, they should have a daily supply of green food in the shape of potatoes, sugar beets, carrots or parsnips, and in autumn green corn, pumpkins, squashes or apples. In summer, green clover, or corn fodder is good for swine in pens, of course in addition to their rations of grain. Sometimes sows refuse to own their young, acting perfectly indifferent to their fate. We have found this readily overcome by holding the sow and allowing the pigs to suck once—after which she will readily care for them herself. B.

Stump Machine.—Can any of your readers furnish a plan of a real good stump machine—one that has been tried and proved by actual experience? H. W. Hargate.
Merrittsville, Mich.

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[For the Country Gentleman and Cultivator.]

Sheltering Peach Trees in Winter.

Eds. Co. Gent.—In yours of 19th inst., you have a short editorial headed, "Peaches every year." This is secured by "training the trees in such a manner that the branches may be bent down and buried with earth, similar to the well known mode of protecting tender grapes and raspberries." The feasibility of the thing is beyond question. I have a number of peach trees—bushy ones too, whose limbs come out near the ground; the lower limbs that get covered with snow, as some of them do every winter, blossom and bear every year, while not a blossom is seen above the "snow line." I have grown a few dozen peaches this year—some of them lying immediately on the ground, and not a peach more than two feet above the surface. If I had protected all branches that might have been safely bent down to the ground last fall, and confined them there by wooden hooks, and then covered them with branches of evergreeens or earth, I have no doubt I should have had a bushel or two, instead of a few dozen.

In connection with the above, I copy the following from the *Boston Daily Herald* of Sept. 21st, which says, "The heaviest yield of peaches in the eastern section of of the State the present season, was that of a tree owned by Mr. Elbridge Packard, at North Bridgewater, who raised twenty-four very fine specimens, on a limb which was covered with snow during nearly the whole of last winter." L. Bartlett.
Warner, N. H., Sept. 27, 1861.

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FOREIGN AGRICULTURAL ITEMS.

A recent report from the Registrar General of Scotland, on the mortality of the past year, shows how favorable the practice of agriculture is to the continuance of human life. In the eight great cities of the Kingdom the deaths were 286 during the year, out of 10,000. Out of the same number of people in the small cities there were 226 deaths, and the number was farther reduced in the "rural districts" to only 176—a very significant difference in their favor as compared with the large cities, and one of considerable importance as compared with the smaller towns.

— A French paper, *Le Courier du Bas Rhin*, informs us that the harvest time in that district was heralded by a proclamation from the local authority, offering a reward of a penny a dozen for the carcases of all field mice (*Campagnols*) killed and produced, and a hecatomb of 56,000 was piled up at the mayoralty of St. Hypolite after six days' slaughter.

— The Prussian Minister of Agriculture has offered a Prize of about $430, and a second prize of $215, for the best two essays on "Worms and Insects Injurious to Agriculture," to be written in German, and handed in at the Ministry of Agriculture at Berlin, before the first of July, 1864.

— "We chronicle all kinds of progress with satisfaction," writes Barral, in a paragraph which we translate for the Country Gentleman from the Journal d'Agriculture Pratique,—"we like to render justice to every effort, and we regret often to see those devoted to it discouraged. Of this we have a sad example." It appears that Baron Liebig has published a letter in a late number of the Augsburg Gazette, in which he attacks violently, "not the ignorance of farmers, but the creation of institutions which are intended not only to spread among them knowledge already acquired, but also to achieve still farther steps in agricultural science. Liebig excommunicates at a single stroke, all the agricultural schools and stations so numerous in Germany, and to the labors of which we have so often called the attention of our readers. This celebrated chemist, to whom agricultural chemistry owes so much of progress, now declares that none of these institutions, the establishment of which has always been received with so great favor, can be of any real service. This attack from such a source has produced well founded surprise among these laborious observers, who justly thought they were filling a scientific mission of the highest order in applying themselves to the analysis of the natural phenomena of vegetation and of life, and they have replied with a violence of which we can form little idea in this country. We shall not repeat any of the high words that have been exchanged. But we can not refrain from saying that Liebig, as he owes no little of his renown to his labors in agricultural chemistry, should the less endeavor to discredit the labors of his compatriots who follow the path he pointed out. All is not yet said, nor done; and the agricultural stations of Germany have rendered services which it is unjust to ignore."

Agricultural Exhibitions of the Present Season.

There were many fears that our "Fairs" this "Fall"—to use two Americanisms in the same line—would suffer seriously from the distracted condition of our Public Interests. With that apprehension the managers of some Societies concluded to forego entirely the customary Autumn Meeting—others undertook with great hesitation the labor of carrying out the usual programme.

The Season of these Exhibitions is now nearly over, and we are enabled to look back upon it, and remark in general terms the results that have been achieved. "The great interest of the country, Agriculture, *was never more prosperous*," says the circular of a leading business firm in New-York, sent out last week to their English correspondents; and this statement is amply borne out by the support our farmers have in almost every case extended this year to their Society exhibitions. We hear of few instances of discouragement and failure—many of unexpected and sometimes of unprecedented success. Our columns have already contained notices of several local shows, nearly all of which received the usual degree of patronage. We were informed at Springfield by Mr. Wilder, Dr. Loring, Mr. Atwater, and others who had attended a large number of County Exhibitions in Massachusetts, that the weather of the past six weeks had been almost everywhere propitious, the competition spirited, and the attendance large. The published reports in our exchanges corroborate the statement, and lead us to wish that our space would permit us to present many of these reports in our own columns. Judging from the Ohio papers, the Societies in that State have also done tolerably well, to say the least; and, as to New-York, except in here and there an instance of storms, we judge that these Farmers' holidays have seldom been more generally kept.

Aside from accounts furnished us by our correspondents, many of our friends have sent us notices of their Local Shows, premium awards, &c., as contained in the papers or published by the Societies. Some of these, which we intended to refer to, have been mislaid during the hurry and absences from home involved in the season of Fairs, and we must pass them by with this general acknowledgment. But out of those that remain there are two or three to which we must devote a more special degree of attention:

The Queens Co. Fair, the success of which we have already chronicled, did remarkably well, pecuniarily, for *a single day*. Friend Harold writes us under date of the 7th inst., that everything passed off pleasantly, although his labors were quite arduous and kept him at Flushing for several nights—so pleasantly, indeed, that "even the musquitos there had a most pleasant and musical tune" to his ears; "798 entries were made, $910.88 taken from 15 and 10 cent tickets, and about $830 for memberships, while the Flushing subscription was over $260, making an aggregate of more than $2,000." As the members' tickets admit a whole family, the receipts from this source, together with those from single tickets, prove that the attendance must have been many thousands of people. The Flushing Journal says that the money taken in "exceeds by more than a third the greatest amount ever before received," which certainly is not bad for a war year.

The Columbia Co. Agricultural and Horticultural Association held their show at Hudson, Oct. 1st, 2d and 3d. We hear verbally that it was in all respects very successful, with receipts of nearly $4000!! Our friends in that neighborhood should give us fuller particulars—they may have some claim to rank financially at last, as the "banner county."

The Susquehanna Valley Ag. Society held its Fair at Unadilla, Oct. 1 and 2. The Unadilla Times says that "the display was large and highly creditable in all the departments, to the genius, skill, and productive capacity of the farmers of the Susquehanna Valley, while the number of people in attendance could not have been less than 5,000."

To go out of this State, the Franklin Co., Mass., Exhibition at Greenfield the last week of September, evinces some very gratifying results. The Gazette & Courier pronounces it "the most successful show ever held by the Society;" the Springfield Republican, as a single instance of success, says that "four years ago, at the fair of this society, there were only 8 entries of sheep, and only 23 sheep on exhibition. This year there were between 50 and 60 entries, and over 300 sheep, mostly coarse and middling wool varieties, of the large breeds, for mutton." This progress in sheep growing, together with much improvement in swine, and in other respects, are justly ascribed to the efforts of the Secretary, Mr. Grennell, who was hard at work during the show, says the Northampton Free Press, "dressed in sheep's gray, the product of his own flock, and manufactured into cloth by Field & Hubbard of Leverett."

The Athol, Holden and other Town Exhibitions in Massachusetts are also noted as successful.

From Pennsylvania we receive good accounts of the Montgomery and Bucks County Fairs, as very creditable to the fine agricultural districts which they represent.

A friend who was present at the Provincial Exhibition of Canada West, at London, characterizes it in a private letter, as the best he has ever attended—"the show of stock very large and of excellent quality." We receive full accounts also in the London Free Press and the Toronto Globe. The annual general meeting of the officers of the Association and the delegates from the various County Societies and Mechanic's Institutes, took place on Friday morning, in the large tent, the President H. C. Barwick, Esq., in the Chair. Fred. Wm. Stone, Esq., of Guelph, the 1st Vice-President, was elected President for the ensuing year, by a unanimous vote. Asa A. Burnham, Esq., of Cobourg, the 2nd Vice-President, was also unanimously elected 1st Vice-President, and J. Johnson, of London, for 2d Vice-President. It was decided to hold the next exhibition at Toronto, after which the retiring President delivered his Address, and the meeting adjourned.

[For the Country Gentleman and Cultivator.]

Pickling Cucumbers.

I notice an inquiry in one of the late numbers of the Co. Gent., for a receipt for laying down cucumbers, and although too late for this year's crop, I will give you one which I follow with good success. For a barrel of pickles, 3 gallons molasses, 3 gallons rainwater, and 2 gallons whiskey. In three weeks they will be eatable and continue good until next harvest.

H. W. Hargate.

St. Clair Co., Michigan.

☞ The Demand Notes of the United States, whether payable in New York or elsewhere, will be gladly received at this office in payment for Subscriptions or Advertising. Our distant friends are urged to remit them to us in preference to any Bank Notes but those of our own and the New England States.

THE CULTIVATOR.

ALBANY, N. Y., NOVEMBER, 1861.

☞ A successful experiment in Draining was mentioned to us lately by Judge Sacket of Seneca Falls. He has a home farm of 700 acres under his supervision, although partially occupied by tenants, and has settled upon hereafter putting down an average of 10,000 tile per year upon it. In a sixty acre lot there were six or seven acres "so wet and sour" that the crop on them was always a partial or total failure. He put an open ditch through this, with a drain of 100 rods in length, of 5 inch tile, leading into the head of it, with branch drains of 3 inch tile on either side. The next year the whole was in wheat; "all the dry, good land," which before had far exceeded in yield the wet parts of the field, gave a product of about 20 bushels per acre, while *the portion just underdrained yielded full forty bushels per acre*—difference enough "very nearly, if not quite, to pay for the whole expense incurred. That draining, added the judge, "is a wonderful thing."

Judge S. has a "kink" in laying drains worth mentioning. Instead of bringing a side drain *directly into* the main, he carries it *side by side with the main for a rod or two;* in this way the water passes from one to the other through the joints of many lengths of tile as they lay in close contact, and any deposit that may exist is strained out, so to speak, or at least has considerable room to be got rid of in, instead of lodging directly at the entrance of the side into the main, with the eddy that may be formed by the influx of one stream into the other.

— We took the liberty of asking Judge Sacket's opinion on the question of the wheat producing capacities of this State—"the longer we work our lands," he answered, the better they grow, and the better the production we get." He thought over his experience for many years past, and had no hesitation in asserting that—excepting years when the wheat crop has been destroyed by the midge—*the wheat lands of western New-York have been constantly becoming more productive.* He stated that his brother, Orange Sacket, Esq., whose farm is across the river, about a mile from Avon, in Genesee Co., *has averaged thirty-four bushels of wheat per acre each year for twenty years past*, and that his crop has been an improving one from year to year, instead of showing any symptoms of falling off. It is an interesting instance of a remarkably favorable year, to add that this farm, which is about 600 acres in extent, one season produced 6,000 bushels of wheat upon 154 acres, (39 bushels per acre;) a crop which fortunately came in at a time when wheat sold for $2.25 per bushel, and which therefore brought over $13,000!

Judge Sacket's 700 acres at home are this year employed about as follows, in round numbers:

In Wheat,...............	100 acres.	In Oats,....................	70 acres.
In Hay, ...	200 do.	In Barley,...................	35 do.
In Pasture, ...	100 do.	In Corn, ...	35 do.

Fallow for Wheat crop 1862,.................. 160 acres.

In 1859 he had a hundred acres of wheat averaging a yield of 30 bushels per acre; in 1860 he had 160 acres, which produced 3,270 bushels, or about 20 bushels per acre; in 1861 he never knew the prospect finer than it was when the snow first went off the ground (and he said, parenthetically, that he "never raised a good crop of wheat *unless it came up well* at first,") but the disastrous frost of March cut it off so that his crop this year was only about eight hundred bushels on the 100 acres—55 acres only averaging about 3 bushels per acre. This is an instance of a poor crop from reasons which it was impossible for human foresight to remedy or guard against.

"L 'amelioration des campagnes est encore plus utile que la transformation des villes."

So writes Napoleon III., in a letter under date of Aug. 13th last, to the French Minister of the Interior—"The improvement of the country is a labor of still greater utility than the re-modeling of cities."

That this is not merely intended as a rhetorical period, is shown by the measure which this letter serves to announce, viz., the grant of 25,000,000 of francs (say $5,000,000) for the improvement and extension of Country Roads. "It does not suffice," says the Emperor, "to reclaim and make productive vast extents of territory, to labor for the bringing into value of communal properties and the replanting to wood of mountain lands, to organize exhibitions and multiply societies—we must, above all, prosecute with vigor the completion of parish roads, as the greatest service we can now render to agriculture." The task has therefore been determined on and undertaken—at the cost above specified, and to extend over a period of seven or eight years before the plans now laid out can be accomplished—of improving, extending and completing the means of general internal intercommunication, such as the highways which connect villages and *communes*, or give them access to the imperial and departmental routes already existing, and to railway lines.

We have not referred to this subject, however, with the view of quoting the interesting figures which might be given as to the labor and money already expended upon French roads, but in order to illustrate, in this new and large appropriation from the Imperial treasury, the importance ascribed by a government having at heart the agricultural prosperity of its people, to the existence among them of good roads for the transport of products of the soil and the implements of its culture. One would expect to find greater solicitude on such a question among a people who, like Americans, are their own monarchs—than on the part of an Emperor, full of schemes for military achievement, and mainly bent, as has been supposed, upon adding, at any cost, to the architectural, scientific and recreative attractions of his capital.

But we very much need to take a lesson, in this democratic empire, from Napoleon, or from some other source, as to the attention paid to our roads. To ameliorate their present condition to that degree of excellence which every traveller remarks in the highways of Great Britain and upon many parts of the Continent, would be a benefit which we probably should not very much exaggerate in pronouncing it, in the Emperor's language, "the greatest service yet to be performed for our agriculture." When will our farmers (and perhaps we should add our legislators) learn to appreciate its importance?

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☞ The prospects of the English Wheat Crop of the present year, instead of appearing to brighten as harvest returns come in, seem to look darker from week to week. The Mark Lane Express of Sept. 9 says: "The further we go into the Wheat crop, the more certainly it appears that the yield is short;—notwithstanding the general fineness of the quality and heavy weight. We have heard of parcels, sold in the expectation of a delivery of 3 to 4 qrs. per acre, turning out only a fraction over 2 qrs. ½ bush. There are more only yielding 3 qrs.; and some are still taken at 4 qrs. This, after such a deficient harvest as the last, which with the help of unprecedented imports, left almost nothing for mixing, being followed by the extraordinary claims of France, have placed our markets in a position very unexpected by Town millers. This is shown by their recent reduction in the price of Flour, while the country generally shows a rise, just as the wheat is secured, of 2*s.* per qr., with the tendency still upward, and the French eager purchasers."

We have already referred to the mediocrity of the wheat crop in France, and notice that a correspondent of the London Review says "it is one of the very worst the country has suffered from for a long time." The New-

York Evening Post of Saturday night last states that "French buyers have almost controlled prices in this market for some time past, their orders having been on a very extensive scale," and that, owing mainly to this French demand, the sales of grain on the New-York Corn Exchange the day before (Sept. 27th) reached the heavy aggregate of three-quarters of a million bushels. Pretty fair *for one day's business!*

The Adirondac Grape.—We have received from our friend, Mr. John W. Bailey of Plattsburgh, a sample of his new grape, "the Adirondac," which he discovered growing at the foot of the Adirondac some years since. In a note accompanying the grapes, Mr. Bailey says:

"I send you an inferior sample of the *Adirondac.* The vine was layered this season, and two or three bunches of natural shape and form were produced, which have been disposed of. They usually grow about the size of the Isabella, but more the *form* of the Diana—quite compact and slightly shouldered. When it ripened this season, 17th Sept., the Isabella had not changed color in the least; the Delaware and Concord had just commenced changing color. This sample is deficient of its usual flavor. Last season they were ripe about two weeks earlier. This sample was picked last Thursday. I send a a small bunch of each, the Isabella and Concord, for comparison. The Adirondac has produced fruit for five or six years, and ripens from 5th to 20th Sept., or two weeks before any other."

Samples of the Adirondac were shown at the late exhibition of the Montreal Hort. Society, where they attracted much attention and commendation. A grape that will ripen ten or fifteen days earlier than the Delaware and Concord, even if only of tolerably fair quality, cannot fail to prove a valuable acquisition to the northern part of our country.

☞ We learn that R. A. Alexander, Esq., of Woodburn Farm, Woodford Co., Ky., with whose extensive herd of Short-Horns our readers are already many of them quite familiar, has recently shipped to "Airdrie House," his estate in Scotland, several very valuable animals—among them, we believe, the following:

Bulls—Name.	Calved.	Sire.	Dam.
Albion.	Mar. 14, 1856.	Grand Turk.	Frances Fairfax.
2d Duke of Airdrie.	Sept. 18, 1856.	El Hakim.	Duchess of Athole.

Also three or four cows and heifers, like the foregoing, of the choicest character and pedigrees. Mr. Alexander's name is therefore to be put down on the list of European *exporters*, as well as importers, of Short-Horns, and we should not be surprised to hear of his following the present shipment with others. We can but express our regret that some of our best animals are thus being lost to the country, although at the same time glad to know that they are going where they cannot fail of due appreciation.

☞ The Vermont State Fair, held at Rutland, Sept. 10–13, appears to have been tolerably successful; the weather was not favorable, but "the show," writes the Secretary, "was in some departments fully up to those of former years, and in others it was more or less meagre. The number of horses on exhibition was less than two-thirds the average for the past ten years, and the general quality of those exhibited was proportionately reduced. In explanation of this fact it is said by those who are competent to express an opinion in the matter that there is now a smaller number of valuable horses in Vermont than in any former year since the State Society was first organized. Good horses have been raised in the State every year, but they have been exported until but comparatively few are left. This is more particularly true of the Black Hawks than of the other branches of Morgan horses. The exhibition of cattle was large and fine, especially in the department of thorough-bred stock. Several fine herds of Durham cattle were brought, and single animals from other herds were numerous. There was but one considerable herd of Devons. The number of grade cattle was large, and many of the animals were superior in form and quality. The show of sheep was not inferior. The number of entries was nearly up to the usual standard, and the animals were of a quality that convinces us that our sheep breeders do not contemplate any retrogade movement. Butter, Cheese, and Maple Sugar, were all largely represented by excellent specimens; but in the remaining departments, including Mechanics' and Floral Halls, the show was very barren." The receipts will very nearly cover the Premium List and Expenses.

Ohio State Fair.—An account of this Fair appears in the last Ohio Farmer, which concludes as follows: "Taking everything into consideration, it has proved a successful one, and leaves the Board in a better condition than before. The people of Dayton did all in their power to make their visitors happy; and it is seldom we have spent a more pleasant time than during the two weeks of our visit. Long may their city flourish, and may they increase in basket and store."

☞ The following Commission has been appointed by the President to represent the Interests of American Exhibitors at the Exhibition of the Industry of All Nations, to be held in the city of London, in 1862:—Wm. H. Seward, Secretary of State; Caleb B. Smith, Secretary of Interior; Edward Everett of Massachusetts; Joseph Henry of the Smithsonian Institution; Robert B. Minturn of New-York; J. Dawson Coleman of Pennsylvania; John H. Klippart of Ohio; James R. Partridge of Maryland; B. P. Johnson of New-York; Richard Wallach, Mayor of Washington; W. W. Seaton of Washington; Joseph C. G. Kennedy, Superintendent of the Census Bureau.

A Productive Northern Spy.—Wm. H. Potter of Batavia, recently informed us that ten years ago he grafted an apple tree, then about the size of one's wrist, with the Northern Spy. Last year it bore four barrels of fruit. A tree on our own grounds in one instance proved nearly as productive. A young tree about the usual size for setting out was transplanted into a soil made rich by finely intermixing old manure, but too remote for the roots to reach it until the second year. The tree grew finely, and bore eight bushels the nineth year. The Spy is long in coming into bearing, but afterwards the product compensates for the delay.

The Michigan State Fair.—This Fair was held at Detroit the last week in September, and was, under all the unfavorable circumstances, quite as successful as could have been expected. The number of entries was about 1,500, and the receipts $6000. During the Fair the officers for next year were elected as follows:

President—J. B. Crippen of Coldwater.
Treasurer—B. Follett of Ypsilanti.
Secretary—R. F. Johstone of Detroit.
Members of Executive Committee—H. Lyon of Plymouth, W. J. Baxter of Hillsdale, B. Dewey of Flint, E. S. Moore of Three Rivers, Solomon S. Bailey of Grand Rapids, A. S. Welch of Ypsilanti, Ira H. Butterfield of Macomb, and in place of J. J. Newell, resigned, A. S. Berry of Adrian.

Potatoes on the Stalks.—I have this summer for the first time noticed the same "freak of nature" mentioned by Dr. Cole, while digging my early potatoes, and upon a number of hills. Some of the bulbs were quite large, of a deep purple color, and were not confined to the axillæ of the leaves, but grew along the stalks instead of leaves, small leaf-buds being partly developed from the eyes of the bulbs. I had three varieties planted, but this occurred only on one kind known as the "Mexican." It is new to my neighbors as well as to myself. May it not indicate a different mode of hilling for the varieties on which it occurs. J. M. H. *Coudersport, Pa.*

☞ At the late Show of the Massachusetts Horticultural Society, A. D. Webber of West Needham, exhibited six squashes *produced from one seed*, the aggregate weight of which was 695½ lbs.

☞ We lately had the opportunity, as intimated last week, of looking over the beautiful DEVON HERD of EDW. G. FAILE, Esq., a part of which is now at the farm of his son at White Plains, and the remainder, as heretofore, at West Farms. It still manifests the same careful attention and skillful breeding which have rendered its representatives prominent whenever they have appeared at our chief Agricultural Shows; some of the imported cows are not yet beyond the age of bearing, while the part of the herd now in its prime, both male and female, mainly consists of home-bred animals, and, like the generation of "young things" following in their wake, includes many to which we might point with pride, as illustrative both of the adaptedness of the breed for useful purposes here, and of the full maintenance of its excellencies in American hands. One of these, the three-year-old bull "Cayuga," we cannot refrain from alluding to individually; sired by Teemseh, a calf of Frank Quartley's out of Ada, both imported from the Quartley herd, his dam was Bowley, purchased from Mr. Turner, so that he runs back to the best sources on each side—an ancestry to which he does full justice; and although now only in ordinary condition, or perhaps scarcely that, as Westchester pastures have been a little pinched during a dry autumn, manifests in all respects a gratifying development of those merits which won him first prizes, as a calf at our Syracuse State Fair in '58, and as a yearling at Albany in '59.

At Mr. FAILE's farm the buildings are all for practical purposes, and might be imitated in some respects to advantage by any farmer. In their construction the most important points, such as cleanliness and ventilation, were fully borne in mind, without, in these or other respects, the outlay of any unusual or unnecessary degree of expenditure. The matter of ventilation, for example, is attended to in a very simple way, which if elsewhere practised has never before particularly attracted our attention: the windows of the stables are protected by vertical slats upon the outside perhaps two or three inches wide; an interior frame, having slats of a corresponding width, is made to slide backward and forward just far enough for its apertures either to coincide with those of the outer slats, leaving the spaces all open, or with the slats themselves as far as may be desired to lessen or entirely shut off the admission of the air. In this way, and by placing the windows so that the draught shall not come directly upon the animals themselves, in the very coldest weather there may be enough air admitted for complete ventilation without affecting their comfort; and there is room in warmer weather for a large circulation, without the expense and annoyance of shutters or sash, with neither of which can the amount of air admitted be so easily or perfectly regulated.

At the White Plains farm, of about 300 acres, which only came into the possession of Mr. SAMUEL FAILE about eighteen months ago, being then in a very dilapidated condition, great improvements have been undertaken; the whole re-laid out, much new stone wall erected, a large quantity of tile well put in, generous dressings of bone dust and other manures applied, and deeper plowing carried on, until already renewed evidences of its natural fertility are making themselves manifest, and high promise afforded as to future results. A field of rye presenting a finer appearance than any other Autumn sown grain we have yet seen, is an example,—the only fear being that it may be showing too great luxuriance for so early in the season. The land lies high and most admirably for the use of machinery in farming, and the site is in other respects both advantageous and pleasant. Few better localities could be selected to show the advantages of *good farming*, and what improved methods *can accomplish*; and few which at the same time would afford to a young beginner more encouragement in making the trial.

We had also the pleasure of looking over the beautiful grounds of THOMAS RICHARDSON, Esq., but just at dusk, so that his fine collection of evergreens and extensive range of glass, covering a large and valuable collection of ferns among other rarities, could only be imperfectly enjoyed. By lantern we also scrutinized four or five Alderneys, which were only received from across the water a few days before. We shall some time hope to enable our readers to share with us the pleasure of a daylight examination of Mr. R.'s favorites among both plants and animals; we presume there are but one or two "amateurs" in the United States, whose collections, in the department of evergreens for instance, are equally full and interesting, and we have not a great many examples of ornamental gardening carried to so high a degree of perfection on so large a scale. Mr. R. is also interested in practical agriculture, but his farm is situated near Burlington, N. J.

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☞ THE ANNUAL REGISTER OF RURAL AFFAIRS for 1862, which has been for some weeks advertised in our columns, will be ready to send out early next week. The general character of its contents and the extent to which it is illustrated, will appear from the Advertisement alluded to; and we may add that in both respects, it is at least equal in value and interest to any number that has preceded it.

The low price at which it is sent by mail *per dozen*, is such as to remunerate any one quite liberally for the sale of this quantity, and we know of no way in which so much useful reading, accompanied by so many engravings, can be had by the farmer for *Twenty-five Cents*, as by the purchase of a single copy.

Any or all of the seven previous numbers of the ANNUAL REGISTER may at any time be procured. Those enclosing a remittance will be particular *to mention the year required*, as mistakes frequently occur from orders naming the wrong year—it is the number for **1862**, it will be remembered, which is now coming out. Postage stamps may be sent for change.

PRICE OF THE ANNUAL REGISTER FOR 1862.

SINGLE COPY, post paid,	25 cents.
FIVE COPIES, do.	$1.00
ONE DOZEN, do.	2.00
ONE HUNDRED, per Express,	15.00
COMPLETE SETS, Eight Nos., post paid,	1.60
TWO COMPLETE SETS, do.	3.00
THREE do. do.	4.00

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☞ The great HEREFORD SALE at Cronkhill, as we learn from our English exchanges, resulted as follows:

First day, 104 head old and young, sold for,	£2,959 17s.
Second day, 42 heifers,	1,018
34 bulls,	1,353

Being an aggregate for 180 head, in round numbers, of about $26,800, and an average of not quite $150 per head all around—about $135 per head for females, and about $195 per head for males. The highest prices paid were 100 guineas for the bull "Retribution" and 70 guineas for the bull "Canning" both to go to Australia. Several head were purchased for FRED. WM. STONE, Esq., of Canada West, who was the only purchaser whose name we find as coming from this side of the Atlantic; his purchases were Jenny, for 26 gs.; Agatha, 30 gs.; Graceful, 23 gs.; Wildrose and Sweetheart, heifers, at 40 gs. each, and the bull Sailor at 20 gs. Among other purchasers, were Col. Hood for the Windsor farms of Prince Albert, and many prominent land owners and occupants of the neighborhood. The prices are probably all that could have been hoped, on so large a sale, while they are very possibly below the standard of value at which the late Lord BERWICK would in many instances have rated the individual members of the herd.

The sale also included a flock of about 600 sheep, chiefly Shropshires—about one-half breeding ewes; "a lot of handsome white Berkshire pigs;" some dairy cows and heifers, and half-a-dozen Bretonne cattle.

◆

☞ Our friends will please not send us Postage Stamps of the old emission, as the time for exchanging them for the new issue has expired, and they are, to us, worthless.

[For the Country Gentleman and Cultivator.]

A TAPE LINE IN THE CORN FIELDS.

Messrs. Editors—How is your corn, says one—How is your corn, says another. Now in the first place I am but a two-year old farmer, and do many things differently from my neighbors. This year I *planted* and *cultivated exclusively* with the Gage cultivator and two horses. Hence my corn is all in drills, unlike my neighbor's, and hence the peculiar significance of the question, "How is your corn?"

I was in much doubt whether to plant in drills or hills. Most of my counsellors advised the latter, but the why and wherefore, no one knew. I adopted drills, as I believed I could thereby give greater room for the roots of the corn and more air and light to the tops, and, with the Gage, plant it and work it with less expense than in hills. The great argument in favor of hills seemed to be with all, that the corn would *ear* better, give more ears, and was more easily cultivated.

Now the question is of so much importance, that I am anxious for more light, and will communicate a few facts bearing upon it.

I wish to vary the question a little from the general one of, which method will yield the most corn by usual cultivation? I wish to know by which method there is the *greatest tendency* to ear, or *set* for ears. To raise the corn I feel quite sure that we must give the plant plenty of food, air and light, which on different soils may be done by different means.

I wish first to be able to produce the greatest number of sets or offers to ear.

I think that I must, for this end, give the plant the highest condition of health and vigor, without reference to its proximity to other plants, or even to its light and air, for my fodder corn, having half a dozen stalks to the foot or more, 2½ feet apart and 9 to 12 feet high, is very much of it well set for ears and much of it has good ears upon it. Also the heaviest corn I have, has the most ears upon it as well as the largest ears, although it has the *least* air and light.

This would seem to show that strong land, bearing heavy stalks, might be planted closer than poor land. Can that be so?

Anxious to be able to answer the question of, How is your corn, which I could not do without comparing it with other fields, and to get facts to bear on the question of drills versus hills, I took my tape line and went into the fields. Making the ring fast to a corn stalk, I counted the ears which I thought would have corn on them on each spear, and also the silks or failures, too small to make even a good nubbin, for a distance of 33 feet in each case.

The trials were made in what appeared the best portions of the field, and also in the average, but none on the very poorest spots. The smallest of these results would be nearer the true average for the fields than the highest, with the exception of No. 12, which is below the average of the field. The drilled corn was, especially where the largest corn appears, dropped full thick, and failing to germinate, vacancies 2 to 5 feet occur, and other places are quite thick.

[The tabular statement here given by our correspondent, we are compelled to omit from the difficulty of arranging it in type, but we give his conclusions which will show the general results.]

We may note from the table that on the whole there is about one ear to each spear, whether there be 50 spears in 33 feet, as in drills, or 37 as in hills, which is about 4 spears to the hill. The Improved King Philip, however, overruns, giving 63 ears to 42 spears.

The drill system gives 50 spears, where the hill system gives 37, and 50 ears to 36 in the hills—all for 33 feet.

It further appears that in the hills, the whole number of ears and silks do not equal the ears alone of the drills, so that were the plants in the hills fed ever so well they could not have equalled the drills if every silk had filled an ear. They wanted more sets and greater vigor and strength when young, which they might have had in drills as well as hills. The remedy therefore, seems to me to be more manure instead of more room.

I should further state that the corn cultivated in drills by horse power, is at least one-fourth heavier both in ear and stalk, than that cultivated by hand, rendering it still more remarkable that it is so well eared.

The common corn is the same variety of seed. I obtained it from my neighbors 2 years ago. The ears of the drilled corn appear much larger, but the harvest may show that they are not so well filled.

I attribute the increased tendency of the drilled corn to ear, to subsoiling and manure; therefore I shall, if confirmed in the theory, plant my corn next year alternately with carrots or roots, very thick—6 rows of corn, 4 rows of roots. Then thin out the corn for my cows by a cart which will pass through the drills of roots, 2½ feet apart, without injury to them. The great trouble in thinning out corn for feed, is for a man to get through heavy corn with facility with his back-load and the distance to carry it. But I am satisfied that 1 acre of land will yield 8 to 10 tons of green fodder, cut off before filling, and then give a good crop of corn. S. W. Hall.

Elmira, N. Y., August 31.

BEST WAY OF SELLING PORK.

"After hogs are butchered, is it best to sell them as they are, or pack them?" Hiram Olmstead of Walton, Delaware Co., in an Essay on "Practical Farming as Connected with the Butter Dairy," asks and answers this question as follows:

"Assuming that pork is worth $7 per hundred, in hog, and $19 per barrel—hams will bring 12½ cents, shoulders, 10 cents, and lard 12½ cents. Every ten pounds of pork packed, will weigh out eleven after it is salted. Hams and shoulders will fall short after they are smoked, about one-eighth. Cut up the hog in the following manner. Split the hog through the back bone, take out the lard, cut off the head, cut out the hams and shoulders, and cut the side meat into strips, the way the ribs run through the back bone. One hundred and eighty-five pounds of side meat will make a barrel of mess pork, and will weigh out after it is salted over 200 pounds. Dissolve salt-petre and bathe the hams and shoulders, and rub on all the fine salt that will stick to them, and keep them covered with salt two weeks. If large, they will want to lay three weeks. Wash off the salt, and smoke. The coarse meat will be the legs, head and the rib, on the inside of the shoulder. At the prices named we will see what four hogs, weighing fifteen hundred, will come to:

5	barrels pork, 185 lbs. each,	925 lbs.,	at	$19.00	per bbl......	$95.00
100	pounds lard, less 5 lbs..	95	do.	12½	per lb.,.....	11.87
200	do. ham, less ⅛ lb.,	175	do.	12½	do.	21.88
144	do. shoulders, less ⅛,	126	do.	10	do.	12.60
131	do. coarse meat, at 2½, ...					3.27
						$144.62
	Less five packing barrels at $1.12..				$5.62	
	Less four bushels salt and saltpeter, ...				3.50	
						9.12
	Value of 1,500 lbs. pork packed, ...					$135.50
	Value of 1,500 lbs. sold, at $7					105.00
	Profit for packing, ...					$30.50

The value of the pork at these prices is nine cents per pound, after it is packed."

A California Bee Story Endorsed.—The London Field copies from the Country Gentleman the recent statement, (see page 127 of this vol.) from H. Hamilton of California, headed "Great Yield of Honey," and remarks:—"The rapid increase of swarms is not altogether without a parallel, as a corresponding rate of increase has been obtained in some parts of New-Zealand and Australia. It is obvious that without the advantage attending the use of moveable frame hives, the bees could not have been deprived of their surplus stores with the same degree of certainty and ease as must have been necessary to ensure so large a harvest."

THE ILLUSTRATED

1862. ANNUAL 1862.

REGISTER OF RURAL AFFAIRS.

THE EIGHTH NUMBER, for 1862, of THE ILLUSTRATED ANNUAL REGISTER OF RURAL AFFAIRS is now nearly ready for the press. In the attractiveness and value of its contents we do not think it has been surpassed by any preceding number. We submit below a partial abstract of its contents, which will show their variety and the extent to which they are illustrated—the present number of the ANNUAL REGISTER containing more than

One Hundred and Sixty Engravings.

The ANNUAL REGISTER for 1862 will be ready early in September, and we are now prepared to receive orders for single numbers or in quantity, which will be filled as soon as it is issued. The attention of OFFICERS OF AGRICULTURAL SOCIETIES, and others who propose attending Town, County or State Fairs this Fall, is particularly requested to the ready Sale which may be had for the REGISTER during these anniversaries, and on other occasions throughout Autumn and Winter. TERMS—as heretofore: SINGLE COPIES, postpaid, TWENTY-FIVE CENTS; ONE DOZEN COPIES, postpaid, TWO DOLLARS; ONE HUNDRED COPIES, FIFTEEN DOLLARS, and larger quantities at a farther reduction.

TO ADVERTISERS.

TWENTY PAGES only will be devoted, as in the previous issues, to ADVERTISEMENTS. The number being limited, more or less applications have each year arrived too late for admission upon them; last year some of our best friends and advertising customers were thus disappointed, and on this account, as well as in order that the work may be expedited as much as possible, it is desired that all who wish for space should send in their advertisements IMMEDIATELY. Notwithstanding increased circulation, prices remain for 1862 as heretofore:

One Page,	$20.00
One-Half Page,	12.00
One-Third Page,	8.00
Cards, from	$3.00 to 5.00

PARTIAL ABSTRACT OF CONTENTS.

Among other valuable chapters, the ANNUAL REGISTER for 1862 will contain the following:—

I. FARM BUILDINGS—THIRTY ENGRAVINGS and Four Designs.
1. General Considerations.
2. Estimating the Capacity of Barns.
3. Form of Farm Buildings.
4. How to Plan a Barn.
5. Barn Basements.
6. Cost of Barns.
7. Design One—Barn for Fifty Acres or Less.
8. Design Two—Barn for Seventy-Five to a Hundred Acres.
9. Tool Rooms and Details in Stable Construction.
10. Design Three—A Large Three-Story Barn.
11. Design Four—A Small Three-Story Barn.
12. Various Details.

II. VEGETABLE PHYSIOLOGY, or How Plants Grow—SIXTY-ONE ENGRAVINGS.
1. The First Formation of the Embryo.
2. The Seed and the Requirements for its Germination.
3. Process of Germinating in Plants having One and Two Seed Leaves.
4. Mode of Growth and Structure of the Plant or Tree.
5. The Root—Layering; Cuttings; Transplanting
6. The Stem and Branches.
7. The Buds and Leaves.
8. The Process of Growing.
9. Principles of Grafting and Budding.
10. Flowers—their Organs; the Crossing of Different Varieties.
11. Species and Varieties.

III. THE GRASSES—THIRTEEN ENGRAVINGS.
1. Importance of the Grass Crop.
2. Descriptions of the more Common Species.
3. Nutritive Value of Hay.
4. Management of Grass Land.
5. Suggestions in Hay-Making.

*** This article includes plain and concise descriptions of no less than TWENTY-TWO of the different grasses, with the peculiarities of which every farmer should be familiar—eleven of them accompanied by carefully drawn illustrations.

IV. LIGHTNING RODS—THIRTEEN ENGRAVINGS.
1. Essential and Non-Essential Points in their Erection.
2. Materials and Connections.
3. Length, Height and Supports—Stiffeners above the Roof.
4. Entering the Earth.
5. The Copper Rod—Various Errors—Cost of Rods.

V. BALLOON FRAMES—TWENTY-FOUR ENGRAVINGS.
1. Their Merits and Practicability.
2. Method of Raising—the Sills, Studs and Wall-Plate.
3. Directions for One-Story Buildings.
4. Directions for Two or Three Story Buildings.
5. Siding, Lining and Construction of Partitions.
6. Framing Large Barns.

VI. THE APIARY—THIRTEEN ENGRAVINGS.
1. Advantages of the Movable-Comb Hive.
2. Descriptions of Different Kinds.
3. Management of Bees.

VII. THE ORCHARD AND GROUNDS—FOURTEEN ENGRAVINGS.
1. Summer Pears—Old and New Sorts.
2. The Value of Orchards.
3. Training Weeping Trees.
4. Removing Large Trees.

VIII. THE FARM—HOW FORTUNES ARE SOMETIMES SUNK.

IX. FRUITS AND FRUIT CULTURE—ONE ENGRAVING.
1. Rules for Pruning Grapes.
2. Directions for Transplanting.
3. Root-Grafting the Grape.
4. Depredators and Diseases.
5. Apples for the West.
6. Selection of Hardy Grapes.
7. Young Cherry Trees.
8. High Prices for Pears—The Glout Morceau.
9. Broadcast Cultivation—Apples in Wisconsin.
10. Hardy and Tender Trees—Culture of the Blackberry.
11. Culture of Dwarf Apples.
12. Transplanting Strawberries.

X. THE DAIRY.
1. On Cheese-Making by Beginners.
2. Hiram Mills' Way of Making Butter.
3. Two Valuable Rules in Making Cheese.
4. Butter Dairies of Chenango and Delaware Counties.

XI. DOMESTIC ANIMALS—TWO ENGRAVINGS.
1. The Best Doctor for Animals.
2. Shropshire Down Sheep.
3. Wintering Sheep.
4. Training Cattle to Jump.
5. Registering Sheep—Care of them in Spring.
6. To Prevent Horses Kicking—Teaching them to Canter.
7. Making Cheap Beef—Beginning Winter Right.
8. Regularity in Feeding—Profits of Sheep Raising.
9. Training Draft Animals—Cattle Racks.
10. Swine Fed on Skim Milk—Treatment of Sows with Young Pigs.
11. Relieving Choked Cattle—Weaning Lambs

XII. RURAL ECONOMY—THREE ENGRAVINGS.
1. Nails, Nuts, Screws and Bolts.
2. Farmer's Tools.
3. The Union Washing Machine.
4. Hay and Grain Racks.
5. Preserving Shingles.
6. Facts for Poor Farmers.
7. Time for Cutting Timber.
8. Durability of Posts.
9. To Keep Plows Bright.
10. Sawing and Thrashing by Horses.
11. Provide Domestic Conveniences.
12. The Use of Rawhide.
13. How to Tan Rawhide.
14. Sap Pails.
15. The Cost of Fences.
16. Use of the Clod-Crusher.

XIII. USEFUL TABLES.
1. Value of Food for Domestic Animal.
2. Weight of Grain to the Bushel.
3. To Measure Grain and Corn in the Granary or Crib.
4. Measures of Capacity, Length and Weight.
5. Weights of a Cubic Foot and Bulk of a Ton of Different Substances.
6. Capacity of Soils for Water.
7. Velocity of Water in Tile Drains.
8. Contents of Cisterns.
9. Distances for Planting Trees, &c., and Number to the Acre.
10. Force of Windmills.
11. Quantities of Seed to the Acre.
12. Quality of Different kinds of Wood.
13. Gestation of Animals.
14. Quantity of Garden Seeds Required for a Given Area.

XIV. ADVERTISEMENTS.

This, preceded by the usual Calendar pages and Astronomical Calculations, forms a book which is certainly cheap at its retail price, and the Publishers, with a view of rendering its circulation still wider and larger than that of any previous Number, are prepared, as above intimated, to offer the most liberal Terms for its introduction in quantities, either to Agents, Agricultural Societies, Nurserymen, Dealers in Implements and Seeds, or any others who take an interest in the dissemination of useful reading, and in the promotion of Rural Improvement.

Address all orders or inquiries to the publishers,

LUTHER TUCKER & SON,
August 1, 1861. ALBANY, N. Y

"RURAL AFFAIRS"---2 vols. 12 mo.

These volumes consist of a reprint of our Illustrated Annual Register, from its commencement to 1860, with the omission of the Calendar pages and advertisements, and comprise a great amount of matter relating to almost every subject of interest to the Country Resident, and are illustrated with over Eight Hundred Engravings, including Laying Out and Planting Ornamental Grounds and Farms, Plans of Farm Houses and Cottages, School Houses, Barns, Ice and Smoke Houses, Garden Structures, Domestic Animals, Farm Implements and Machines, Fences and Gates, Plants, Trees, &c., &c. No Farmer's Library should be without this work. Price $2—or $1 each, sent by mail prepaid. L. TUCKER & SON.

Just Published, one vol. 12 mo.—$1.25.

MILCH COWS AND DAIRY FARMING;

Comprising the Breeds, Breeding, and Management in Health and Disease, of Dairy and other Stock; the selection of Milch Cows, with a full explanation of Guenon's Method, the Culture of Forage Plants, and the production of Milk, Butter and Cheese; embodying the most recent improvements, and adapted to Farming in the United States and British Provinces. With a Treatise upon the Dairy Husbandry of Holland; to which is added Horsfall's System of Dairy Management. By CHARLES L. FLINT, Secretary of the Massachusetts Board of Agriculture; Author of "A Treatise on Grasses and Forage Plants," &c. Liberally Illustrated.

The above valuable work—the best, we have no hesitation in saying yet issued upon the subject—is for sale at the office of this paper.

Albany, Jan. 1—w&mtf. L. TUCKER & SON.

TRUE DELAWARE GRAPEVINES—

from the original vine—at

REDUCED PRICES!

Good, well-rooted. 1 year old vines, grown in open air, 50 cents to $1 each, $5 to $10 per dozen. Extra 2 year old vines, and No. 1 layers with fruitwood for immediate bearing, $1.50 to $2 each, $12 to $18 per dozen. Also fine plants of Allen's new white Hybrid, Anna, Brinckle, Crevcling, Concord, Cuyahoga, Clara, Catawba, Clinton, Cassady, Diana, Hartford Prolific, Herbemont, Isabella, Lenoir, Logan, Lydia, Louisa, Lyman, Norton's Virginia, Ontario, Oporto, Roger's new Hybrids, (best selection,) Rebecca, Taylor's Bulltt, ToKalon, Union Village, and many other varieties, at reduced prices.

Send stamp for Circular. GEO. W. CAMPBELL,
Oct. 3—w6tm1t. Delaware, O.

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A large and select assortment of Grapevines, Currants, Gooseberries, Blackberries, Raspberries, Strawberries, Downing's Mulberry, &c., &c. No charge for packing.

Full Descriptive Catalogue and Trade List sent to all applicants.
Sept. 19—weow4tm2t. Address HEFFRON & BEST, Utica, N. Y.

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CHEAPER THAN EVER!!

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BERKSHIRE PIGS FOR SALE— OF PURE BREED.

$5 each when six weeks old. WM. J. PETTEE,
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A few COWS and HEIFERS, one aged BULL, and three or four BULL CALVES.

A yearling BOAR HOG, several SOWS and PAIRS OF PIGS two months old.

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July 4—w&mtf.

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John Johuston. Geneva, N. Y.; Wm. Summer, Pomaria, S. C.; R. C. Ellis, Lyons, N. Y.; Col. A. J. Summer, Long Swamp, Florida; A. J. Bowman, Utica, N. Y.; A. Bradley, Mankato, Minnesota; A. L. Fish, Litchfield, N. Y.; Volney Owen, Union, Ill.; John Slighter, French Creek, N. Y.

"Mohawk Valley Clipper," No. 1, full trimmed, all steel,..	$15.00
do. do. with cast point,................	14.00
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For Three-Horse Plows,....................	$1.50 extra.
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STEEL CULTIVATOR TEETH.

These Teeth are intended to supersede the old style of wedge teeth and teeth with cast iron heads. They are not liable to become LOOSE in the frame, like the FORMER, nor to BREAK, like the LATTER. They are as readily attached to the frame as any form of tooth.

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This implement is considered to be superior to any other for cultivating Corn, Cotton, Tobacco, Potatoes, Hops, Broom Corn, Nurseries, and all crops planted in rows or drills.

Steel Shovel Blades and Cultivator Points made, and all kinds of Swaging and Plow work done to order.

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GEO. TUCKERMAN. }
March 21—w&mtf.

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to suit the times, cheap for cash. by
Oct. 3—w3t. C, REAGLES & SON, Schenectady, N. Y.

AG. IMPLEMENTS.

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MANUFACTURE THEIR PATENT

ENDLESS CHAIN HORSE POWERS,

COMBINED THRASHERS & CLEANERS,

THRESHERS AND SEPARATORS,

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Also an improved pattern of LEVER HORSE POWERS and LARGE THRESHERS AND CLEANERS.

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Also our Improved Clover Machines are offered to the public as possessing all the necessary requirements for hulling and cleaning clover at one operation in the most perfect manner.

Prices and description of the above named machines will be found in our Illustrated Circular, which will be sent free to all applicants.

Address G. WESTINGHOUSE & CO.,
Oct. 10—weow6t. Schenectady, N. Y.

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Ingersoll's cheap, portable Hand Power Presses for bailing

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These presses are made for any size or weight of bale required, and delivered on ship board in New-York. Farmers and others wanting such machines are invited to write for Catalogue containing full information. Address INGERSOLL & DOUGHERTY,
July 4—w6mos. Green Point, Kings Co., N. Y.

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Has recently undergone thorough and valuable improvement, and for strength, durability, speed and perfection of work it is unequalled. It chaffs, cleans, separates and ASSORTS for seed all kinds of grain, pulse and grass seeds, and separates oats from wheat, from barley, or from peas—thistles from oats or wheat—timothy from clover, &c., &c., and

All in the most Perfect and Rapid Manner Possible.

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April 11—wtf. Utica, N. Y.

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MOHAWK RIVER UPLAND FARM FOR SALE.

The farm owned and occupied by the subscriber, situated one and a half miles west of the village of Amsterdam, and containing 138 acres of land, 20 acres being in wood, and the balance under a good state of cultivation. Said farm is beautifully located, and commands a view of the Mohawk River and Valley, Erie Canal, and New-York Central Railroad, that cannot be surpassed. The soil is a gravelly loam, and well adapted to all kinds of grain or grazing; the fences are good, (mostly stone,) and so arranged that stock has free access to water at all times. The orchard and garden contains a large variety of choice grafted fruit, consisting of Apples, Pears, Plums, Cherries, Currants, Gooseberries, Strawberries, Grapes, &c. The buildings are nearly new, the house and principal barn having been built within the last ten years. The house is stone and built expressly for a CONVENIENT, COMFORTABLE FARM HOUSE; the main barn is 64 by 32 feet, with 20 foot posts, and basement 10 feet high; it has other barns and sheds adjoining, sufficient to accommodate a large stock. There is also on the premises a small tenant house, nearly new and in good repair. The above farm will be sold on liberal terms, and possession given the first of April next; or if purchaser desires, can buy stock, farming utensils, &c., and have possession immediately. For further particulars inquire on the premises or by mail, of

JOHN M. VANDEVEER.
June 27—w&mtf. Amsterdam, N. Y.

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The undersigned continues to execute orders as heretofore for his pure stock of the above celebrated breed, which will be carefully shipped to any point of the Union, in pairs not akin.

The selections are made only from pure bloods, and chiefly from premium animals which have been uniformly successful at our local Fairs. He refers to purchasers from him in all sections of the Union.

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Feb. 14—wtf. 1120 Market-street, Philadelphia.

THE CULTIVATOR FOR 1862.

FIFTY CENTS A YEAR.

NEW INDUCEMENTS FOR NEW SUBSCRIBERS.

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In order to secure the co-operation of our friends in extending the circulation of THE CULTIVATOR for 1862, at a sufficiently early period to secure a large list to begin the New Year with—we propose to send the remaining Numbers of the present volume to all new subscribers whose subscriptions are received before its expiration. Thus subscriptions for 1862 received before the issue of our next number, will receive the November and December numbers of 1861 in addition to the coming volume complete—making

Fourteen Months in a Year!

And subscriptions received during December previous to the issue of the January number will have THIRTEEN MONTHS IN THEIR YEAR. We have also determined to offer THE CULTIVATOR by itself as follows:—

Eight Copies for Three Dollars.

To the person making up a club of Eight at this rate, a copy of the ANNUAL REGISTER for 1862 will be sent as a PREMIUM.

The Cultivator and Annual Register

will be clubbed together as heretofore at the following rates:

ONE COPY OF CULTIVATOR AND REGISTER for 1862, SEVENTY-FIVE CENTS. TEN COPIES OF EACH, FIVE DOLLARS.

☞ To the person making up a Club of Ten at this rate, a copy of both the CULTIVATOR and ANNUAL REGISTER for 1862 will be sent as a PREMIUM.

The reader is referred to page 338 of this number of THE CULTIVATOR for an advertisement of the ANNUAL REGISTER for 1862, which will be ready to send to all subscribers entitled to receive it as fast as the clubs are filled up. It sells by itself for 25 cents per copy, or Two Dollars per dozen, at which rates we prepay the postage. The character of the coming number, both for the value and variety of its contents, and the profusion and beauty of its illustrations, is equal if not superior to that of any preceding one.

Remember then, if you please, that the Cultivator for 1862 may be had in Clubs of Eight at Thirty-Seven and a Half Cents per Copy; and the Cultivator and Register in Clubs of Ten at Fifty Cents per copy for both; and that all new Subscribers received during the coming two months will receive one, or two extra papers!

Old subscribers who renew will also be entitled to an equal number of extra papers, if they will, after perusing them be so kind as to distribute them among those who will be likely to subscribe for 1862. Numbers of either the CULTIVATOR or COUNTRY GENTLEMAN, as they may prefer, will be furnished for this purpose.

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THE PRESENT AND COMING VOLUMES.

We may refer with no littlle pride to the character of the Current Volume, which, so far from any abatement of interest from the 27 which have preceded it, only seems to grow more and more rich and fruitful with increasing years. We shall use our utmost endeavors to sustain and advance the leading position it has always occupied as the BEST OF AMERICAN AGRICULTURAL JOURNALS AT ITS PRICE.

The Number of its Practical Correspondents in nearly every State in the Union, was never greater, if so great, as at this time.

The Editorial Labor bestowed upon its columns increases every year.

It should be read by Hundreds of Farmers in every County and Town.

Large Clubs can be made up with little effort, if our friends BEGIN EARLY and are determined to succeed.

Prospectuses will soon be issued.

LUTHER TUCKER & SON,
October 1, 1861. Albany, N. Y.

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THE CULTIVATOR.

THIRD] TO IMPROVE THE SOIL AND THE MIND. [SERIES.

VOL. IX. ALBANY, N. Y., DECEMBER, 1861. No. 12.

PUBLISHED BY LUTHER TUCKER & SON,
EDITORS AND PROPRIETORS, 395 BROADWAY, ALBANY, N. Y.

J. J. THOMAS, ASSOCIATE EDITOR, UNION SPRINGS, N. Y.

TERMS—FIFTY CENTS A YEAR.—Ten copies of the CULTIVATOR and Ten of the ANNUAL REGISTER OF RURAL AFFAIRS, with one of each free to the Agent, Five Dollars.

[For the Country Gentleman and Cultivator.]

Agricultural Notes in Monroe Co., N. Y.---No. III.

The Way to Commence Farming.

> "Come, see a farmer at his home,
> When garden, field and tree
> Conspire with flowing stores to fill
> His barns and granary." —MRS. SIGOURNEY.

In a previous communication I recorded the system of farm management adopted by Mr. I. Bower, as affording a very illustrious example for young farmers—and some old ones also—to copy; and in the present communication I propose to pen the system of management which is adopted by Mr. ANDREW CAMPBELL, a distant neighbor, as affording a good example of what Mr. B.'s system will be when successfully carried out.

I deem it not improper here to record my obligations to Mr. Albert Davis, a very intelligent young man, who, learning that your correspondent of the Co. GENT. and CULTIVATOR, which he reads, was in town, came where I was and kindly offered to take me in his carriage to see the country and some of the fine farms, stock, and other objects of interest. A pleasant ride of a few miles, where we passed many very nice farms apparently well cultivated, and nearly as many more good ones, but very badly cultivated, we arrived at the

Farm of Mr. Andrew Campbell,

which affords a very illustrious example of what a young man is capable of accomplishing by good economy and well directed industry. I found Mr. C. to be a very intelligent, practical and energetic farmer, and who possesses far more scientific knowledge than we are accustomed to find in those farmers who can take hold of farm tools or implements and show others how to handle them. Here we have an example not only of *paying* farming, but of *progressive* farming, a system of management which has supported the family, defrayed all the expenses of the farm, and at the same time has produced enough to pay a fair price for it, without having resource to some other revenue.

Mr. Campbell's farm contains about 200 acres, with some 30 or 40 acres of woodland, and on it is found a great variety of soil, from sandy loam, clayey loam to a stiff clay. Mr. C. commenced his career with only about eight hundred dollars—not enough to defray the expense of a good beginning—and has since erected very neat and commodious buildings, and has *paid* for everything with the revenue of his farm. His beautiful door-yard and numerous ornamental trees and shrubs assure us that he has a taste for the beautiful, as well as for those that are of great practical utility.

He has drained with tile to some extent, and appreciates the importance of underdraining. But as it is not practicable for a farmer under such circumstances to perfect all his plans in one season, nor in ten, we shall notice only those items of interest which he has succeeded in bringing to a good degree of perfectibility.

Barns and Stables.

His carriage and horse barn is about 40 feet square, with 18 feet posts, neatly painted with white lead and oil, colored with Indian red, which gives a very delicate and beautiful color. On one side is a close carriage room, which can be closed with blinds, and made dark and neat as a band-box, for nice carriages. On the opposite side is a row of very convenient horse stalls, with spacious mangers for receiving cut feed in front of the horses. The hay rack is made by having rounds in a vertical position, so that no dust or hay seed can fall on the heads of the horses. Hay is put into the racks from the hay loft above. In case a horse pulls out hay faster than he will eat it, his manger will receive it, and nothing will be lost or wasted. Beneath the stalls is an open shed or stercorary, and beneath one part of it an open shed, where tools and implements are housed. A large door from the open shed admits us into a spacious store room, where roots, pumpkins or apples are kept for feeding stock, which, if I recollect right, are put in through a trap door from above. A flight of stairs leads us up into the feed room, where there is a large box or bin, a box for mixing feed, and a pump for drawing water from a spacious cistern. Draw a slide in the end of a large spout above your head, and cut straw and hay will rush down into the feed box *ad libitum.* The building stands on a substantial stone wall—rat proof—and in the northwest corner is his spacious and

Improved Fruit Cellar,

Which is entered through the store-room just mentioned. A neat cellar, with water-lime bottom was first made; and then it was ceiled up neatly and tight, on every side, above and beneath also; and a space of about six inches was left on the sides and beneath, between the ceiling and the stone wall and water-lime bottom, so that the air could circulate freely all round it. Between the ceiling over head, and the carriage floor, the space is filled with grouting or lime mortar. The windows to the cellar are double, i. e., there is one window in the wall, and one window in the ceiling; and either of them can be opened at pleasure, or the inside window can be closed, and the outside one opened; and thus, a current of fresh air can pass entirely round between the walls. The entrance, also, is secured by a door neatly fitted on both sides of the jamb casings. The fruit is placed in shallow bins, one above the other, on each side of the cellar. By this arrangement, all dampness is excluded, and fruit will keep much longer and better than in an ordinary cellar.

The Grain Barn

Stands but a few feet distant from the horse barn, and is 82 feet long and 30 feet wide, with a leanto 16 by 42, all neatly painted a straw color, finished with a heavy box cornice, and doors on rollers at the top, with a good number of windows and green blinds, all resting on substantial stone wall, with a basement for cattle stalls, and *sub-base* for manure. There are, particularly, a good number of glass windows in the walls of the stables, so that the lower sash can be raised and the upper one lowered, to admit of good ventilation. In this respect, I have never met with anything that fully equals this arrangement for ventilation.

His cattle are secured by stanchions, standing on nearly or quite a level floor; and the manger, instead of being one continuous box or trough—as they are usually made—is divided into apartments for each animal, so that one cannot rob another, which is a decided improvement in this style of mangers. In front of every system of mangers is a spacious feed room, and in one end is a pump, where water can be obtained from a large cistern, which receives the water from the roofs of the barns, and overhead there are trap-doors, through which hay or straw may be pitched from the story above; and on one side is a large meal box—rat and mouse proof—which is filled by pouring the meal into a kind of side-door on the upper floor. Another apartment is fitted up for roots, which are let down from above, by driving a load into the barn, when a trap door is opened, and a large load disposed of in a few minutes. Then a door opens into a rat and mouse proof granary, of large dimensions; and between the ceiling on all sides, the space is grouted with lime mortar.

On one of the floors above is one of Emery Brothers' two-horse Railway powers, which drives a very large cylindrical straw and corn-stalk cutter, with which he cuts straw, corn stalks and hay for all of his stock; and there is a huge heap of cut straw, which was not fed out last spring. He cuts up all his straw, except what little is used for bedding; and he not only grinds all of his own coarse grain, but purchases more or less almost every season.

Making and Applying Manure.

Mr. C.'s mode of saving, making, and of applying manure, comes the nearest to a perfect system of any management that I have met with in that county. Such immense piles of the *choicest* quality as he had heaped up, I have never seen. The *liquid* portions had not been allowed to escape—as is the almost universal practice—but they are all retained among the solid portions; and the entire mass is full of the very best grain-producing material. His manure was being hauled out for a top-dressing, on his winter wheat, which he spreads very evenly and thin, after the last plowing, and harrows it well, and then drills in his wheat, and sows timothy in the fall, and early clover the following spring. As we walked across his wheat stubble, on our way to see Mr. C., for he is a working farmer—I observed to my friend Davis, that here we see the immediate effect of good cultivation, and of the application of good manure; and although I had seen nor heard nothing of his feeding, nor of his management of manure, I suggested that, judging from his grass alone, to say nothing of his fine pastures, Mr. C. keeps good stock, and feeds out a great deal of coarse grain, and does not allow his manure to run to waste. Most of his manure was sheltered from the weather; and I perceived that he did not neglect to manure those fields most distant from the barn, as his team was hauling top-dressing to a field about a mile—a practice which most farmers avoid far more than they adopt.

While most people excavate a large hole in the earth, and have an expensive stone vault built for the reception of the contents of the privy, where the entire concern is almost a nuisance, Mr. C.'s is furnished with a large water tight drawer, which is drawn out at pleasure and emptied on the soil or in the compost heap. He makes free use of ashes and fresh lime for deodorizers, and the premises appeared as sweet as a dining-room, although it was attached to the remote corner of the wood-house. This is a very convenient and economical arrangement.

Stock of Neat Cattle.

Besides milk cows and small cattle, Mr. C. has about twenty good bullocks, which are from three to five years old, which he is preparing for the shambles, which are grade Durhams, although some of them showed but little besides the native breed. He feeds very little hay during the foddering season, and taking into the account the very economical manner in which they were kept during winter, they were in fine condition; and I cannot forbear to record the marked superiority of those bullocks that possessed more of the Durham over those that did not inherit the characteristics of that breed. They were all good beef, but where the most Durham appeared, *the handling points* were very superior.

Mr. C. has a large platform hay-scales in his yard, where he weighs all his bullocks—usually about the first of each month—and is able to refer at any time to the previous weight of any bullock at any previous or present time. His bullocks are all numbered respectively from one to twenty; No. one, on any page, always refers to a certain bullock, and so with all the other numbers. I did not inquire by what means he is able to tell which bullock is represented by a given number; but I suppose he tells by the looks of them—by the particular form and color of each animal—which one is number five, or which one number twenty.

His object in weighing them, is to know not only how many pounds each animal has gained or has lost during a given period of time, and how much they have gained in the aggregate, and how much it costs to keep them one month or six months, and about how much a bullock is really worth by the pound—which is the true way to sell fat bullocks.

The time when each bullock was weighed, has been, uniformly, twelve hours after they had eaten any food, and after they had been allowed to drink. By this means he is able to approximate, as nearly as is practicable, to the true weight of each animal.

The practice of having access to a correct scales for weighing bullocks, cannot be recommended too strongly; and I am well satisfied that very many lose quite enough annually, where they sell their bullocks, in *under estimating* their real weight, to pay for a set that will weigh thirty hundred pounds.

Mr. C. feeds the least hay per head during the foddering season, of any man that I have ever met with. I think he told me that his cattle received no hay at all until nearly April, when he commenced feeding them hay once daily. The good condition of his animals showed very conclusively, that there is more nourishment in good straw than most farmers are accustomed to suppose, judging from the manner in which they allow it to go to waste.

Mr. C. kindly allowed me to have access to his book, from which I copied extensive figures; but as I do not think most proper to give them here, for want of space, I will simply give the aggregate weight of the twenty bullocks, during the most unfavorable part of the year for gaining in weight of either bone, muscle, or fat.

On Dec. 28th, the aggregate number of pounds of the twenty head was 27,597, which would give an average weight of about 1,379. On the 12th of the succeeding March the aggregate weight was 29,926 pounds. The aggregate gain in weight was 2,329 pounds, during about two and a half months, and at a season of the year too when we seldom expect but very little, if any gain, in animals that are not being fitted for immediate use for the shambles. The average gain was about 116 lbs., or about one pound and nine ounces each daily. This tells a good story for feeding on straw, and two quarts per day of meal made of coarse grain.

Although Mr. C.'s bullocks were in good condition, still we could not repress the conviction, that if he had expended one or two hundred dollars a few years ago, in securing the services of such bulls as I saw at his neighbors, Messrs. Fellows and Isaac Bower, the money would have been well expended. Without any disparagement to other improved breeds of neat cattle, after making observations in this respect for many years, I am well satisfied, that those farmers who cross their native cows, or Devon cows with Durham bulls, are always sure of a very great improvement not only in *size* of their animals, but in all of those good points which constitute a good animal.

Mr. C. endeavors to do as much at under-draining with tile, every year, as is practicable, and appreciates the importance of under-draining, and is satisfied that it pays well to drain both high and low land, where Nature has not made ample provision for conducting away rapidly all the surplus water which falls on the soil.

Mr. C. fattens more or less pork annually, feeding out large quantities of peas and Indian corn, which makes a good supply of manure, and from which he realizes more per bushel than he could obtain at the market. He raises turnips for his neat cattle, and had about two acres then growing; and sows some corn broadcast for fodder. He raises a great many peas, and drills in his winter wheat after plowing the pea ground, and gives a top-dressing of his rich, barn-yard compost, which keeps the wheat from winter killing, and insures a good crop, not only of straw, but of grain, besides making sure thing of securing a good catch, when the soil is stocked down.

He is experimenting some in trying to make a hedge with the Osage Orange; but the sprouts have died every winter, so far down, that the progress in hedge making is quite slow. Every thing speaks of thrift and good management, and the bountiful dinner-table—delicious pears for a dessert—the neatness and palatability of everything, the good melodeon music, not only spoke well for a kind sister, but assured us that Mr. C's. good success could not be attributed to withholding a good supply of substantial food for himself and laborers. S. Edwards Todd.

EDITORIAL CORRESPONDENCE.

Fruit Culture in Indiana.

Richmond, 10 mo. (Oct.) 7, 1861.

During the few days I have been spending at this place, I have availed myself of occasional opportunities to visit some objects of horticultural interest in the neighborhood. This morning, in company with Dr. Warder, and J. C. and E. Y. Teas, I called at the rural residence of Benjamin Strattan, one of the merchants of this city, which we reached by a pleasant ride of two miles through a fine portion of the country over the national road. Unlike many country residents, who first cut down the growth of native trees, and then re-plant the same ground, the proprietor of this place selected and thinned out a portion of the forest, and built his house upon the site. The trees have not at once the round, full and low heads of park trees, given to such by having plenty of light and space to develop themselves, but in the present instance some of the bare trunks have been handsomely clothed with the native trumpet-creeper, prairie roses, and honeysuckles. The soil is a fine rich loam, resting on a subsoil that will hold water in post-holes. A small vineyard (for family consumption) was planted on this soil; the vines grew well for some years, but produced no fruit. It was then ridged with the plow, throwing the earth up towards the vines, and leaving a broad open drain between the rows, which effected good drainage, the land having some slope. It immediately began to bear, and now, the third year, the crop is a most profuse one. The vines, which are nearly all Catawba, are twelve feet apart in the rows, and twenty feet apart on the trellis, which is made of wire, and on which they meet, and cover the whole surface. Some have been planted but eight feet apart, but the greater distance is preferred. This mode appears to be much better than the thickly planted single canes of the Cincinnati method. The crop presents a luxuriant appearance; the clusters are large, dense, and ripened to a handsome purple. They are raised on spurs, and cover them so closely as to present the appearance of large single clusters, some nearly a foot in length and half a foot broad, and the fact that they were of more than one cluster could be determined only by examining the stem on which they grew.

One of the many new varieties of the Isabella, an accidental seedling, grows on another part of the grounds, and it may prove one of much value. It is now six years old; it forms two arms, each about an inch and a half in diameter, and extending over thirty feet on each side. B. Strattan thinks it fully two weeks earlier than the Isabella, judging from the fruit growing side by side; but a part of this difference may be owing to the greater vigor of the young vine. In flavor, the new sort, if not superior to the Isabella, appears to be fully equal to it in every respect. It is certainly worthy of further attention. I understand that E. Y. Teas of this place, has a small supply of plants for his correspondents.

A fine peach orchard had borne a good crop the present season, but all had disappeared except the Heath Cling, the trees of which were bending under the heavy crops of the large, rose-tinted specimens.

A half mile from this place is the fine market peach orchard of George Cole. It consists of a thousand trees, covers ten acres, and has grown six years. Although the trees are twenty feet apart, the branches have already met between the rows in many instances, and are not devoid of foliage in the centre, but green and thrifty throughout. The ground is well cultivated. It is the best peach orchard of its size and age I have anywhere seen. The peach crop is very uncertain at best through this region, and this is the first crop. Two thousand one hundred bushels have already been sold, at two to three dollars per bushel, and there are some fifty bushels of the Heath clingstone yet to market. The product must consequently be some five thousand dollars or more—nearly enough to pay for the whole hundred acre farm. Oldmixon free has proved the most profitable variety, both on account of its beauty and its productiveness—although in quality not quite equal to some others. Next to this is Walter's Early,—a great bearer; and Serrate Early York, for its earliness. Next in value are Oldmixon cling and Heath cling. I found the trees bending under their loads of the latter, and the owner selected for me a basket of the fruit, the specimens of which measured each about three inches in diameter. Crawford's Early proves of little value in this region on account of its deficient bearing. Peach trees are easily raised; the young trees may be bought this year for a ten acre orchard like this, for forty or fifty dollars. Yet possibly they might not bear in many years so good a crop as this; and even then it might not bring these prices. In other words, the business would partake somewhat the character of a lottery—the cost being a few hundred dollars in all; and the highest prize five or six thousand dollars as in the present case.

This portion of the state, as elsewhere, has plenty of Osage hedges, but there is scarcely a really good one among the whole, owing to the simple fact that none are properly managed, and very few at all cultivated when young. Some are irregular and full of gaps, and others are too thin beneath, and are becoming yearly more so, in consequence of deficient cutting back. Dr. Warder thinks that a benefit will be gained by placing the plants more remote from each other than is usually done, that each may become more perfectly developed than could possibly be the case when the roots are crowded. The same opinion was expressed by Ex-Gov. Throop, who has at his residence near Auburn, N. Y., one of the finest young buckthorn hedges I have any where met with, four feet wide at bottom, three feet high at top, where it is a narrow ridge, the plants being set about eighteen inches apart in the row—the whole thoroughly cultivated and well cut back. J. J. T.

[For the Country Gentleman and Cultivator.]

Farming and Crops of Western Illinois.

Rock Island County, Oct. 4, 1861.

Editors Co. Gent.—I have delayed writing for a long time, that I might be better prepared to state the probable result of our crops for this year.

Wheat, being the first crop that requires our attention in the spring, will be first considered. As we never plow the ground in the spring for wheat, we watch the first opportunity as the frost goes out to sow. When the ground of the fall plowed stubble, and the fields of standing cornstalks, which the cattle have browsed during the winter, is sufficiently dry, we sow the seed and start the harrow. The latter part of February and all of March up to the 22d, was very dry. Probably one-third of the wheat sown in the county, was put in up to that date, the ground being very loose and mellow. The remainder of the wheat seeding season was wet. Heavy rains packed the ground, and all the wheat sown in the mud yielded lightly, while the early sown, that had a fine mellow seed-bed, yielded nearly an average crop. Our season on the whole, for a wheat crop, was not a good one. Spring was wet and cold, the ground heavy by too much rain, and when the crop headed out the straw was short, and the growth very uneven; some tall and many short straws, more so than usual. The rust and Chintz bug did much damage in all localities, while the army worm took all in some places. We had good weather for harvesting and nearly all was in good condition when stacked. Last year our wheat yielded more than our estimate when stacked, which led farmers to put too high a yield on the crop of this year. Some of our western editors, (some not knowing the difference between wheat and other grain,) rode out on the railroads, and forthwith out came lengthy editorials, blazoning to the world that the Great West had raised her millions, equal to the crop of last year. *The old farmers read and shook their heads.* Thrashing commenced, and where twenty bushels was hoped for, twelve was about all the *machine could shell out*, and so down to five bushels per acre. There were a few fields that yielded twenty-five bushels per acre—some ten, and some barely paying for the work in harvesting; and many fields not cut at all. We now learn from what has been thrashed, that about one-half the amount of wheat was raised in Illinois, Wisconsin, Minnesota and Iowa, that was raised last year, and not of as good a quality.

Another serious draw back is now upon us. We have had for the last six weeks, many long and heavy rains, scarcely three days of fair weather at a time. Our grain stacks are badly damaged, some being wet through from top to bottom, and many have a green carpet of grown wheat on the top and sides. During this time but little thrashing has been done; some, however, thrash as well as they can, and get the grain where it can dry. Much of the wheat received at Chicago by rail during this wet weather, is placed in the class of *rejected*, and gone into store to rot or dry.

There were many who believed that a large crop had been raised, and as we would have no market south during the winter, and low prices must rule, rushed their wheat into Chicago, there being no other market, at a rate never before known, some weeks a million bushels being received. A great share of this rush to market was of the old crop. Warehouses were full. Shipping rates came up. From 11 to 13c. for corn, and 14 to 15c. per bushel for wheat is paid from Chicago to Buffalo, which is more than double that of usual freight. Our wheat market varies as we distance Chicago, bringing there from 65 to 78c. per bushel. Railroad freights about 5c. per hundred miles. Many towns on the Mississippi River, that usually have shipped their produce south, now take it by steamboat to some railroad that intersects, thence to Chicago—so that wheat in the bins of some of the farmers is worth about 40c. a bushel.

If the fall of rain has extended all over the northwest to the amount we have had here, (over four inches fell last night on a level,) we may look for more serious damage in our grain stacks, and corn will be slow in drying for the crib.

P. S.—As we have but little winter wheat, my remarks are wholly on spring wheat.

Barley—the next crop that requires our attention in the spring. As we raise but little of this grain, little need be said. It is mostly sown soon after wheat, and usually on fall plowing, harrowing being the only cultivation given to it. A fair crop for the amount sown was readized this year. It is usually cut with a reaper, bound and stacked as wheat. That not thrashed shares the same fate in the stack that wheat does, "taking the rain as it comes." Price at Chicago, 26 to 30 cents per bushel.

Rye—next in order. More rye is being raised in this vicinity than in former years. A fair crop was raised this year, yielding some 25 bushels per acre. Being inconvenient to stack, it is usually thrashed as hauled from the shock, and the straw piled for winter use. Price at Chicago, 26 to 30 cents.

Oats.—Owing to the low price of oats, and from the fact that we can raise a bushel of corn as easily as a bushel of oats, the oat crop is not much depended upon from which to make money or to feed. Our oats are usually sown as early in April as the ground is ready—usually on fall plowing or on cornstalks as our wheat; seldom plow in spring for this crop. There was not a wide breadth sown this season, but the crop seldom has yielded better. The straw ripened very brightly and the grain very heavy. Many fields were judged to yield sixty and some as high as eighty or more bushels per acre. Price at Chicago, 12½ to 14 cents.

Corn our Staple Crop.—Owing to our cold wet spring, corn was not planted in a condition to hope for a very good crop. On the first of May it was quite dry for a few days; the corn planter was brought out and put to work; many large fields were then planted, the driver and dropper wearing overcoats and mittens to keep warm. The ground being so cold, much of this planting rotted. I will here remark that better seed corn was never committed to the earth than we had last spring. The usual care was taken to save it in the fall—that is by going into the field and selecting the largest and most perfect ears, which were strung up in the loft of some building out of the way of harm. In fact we had no other but seed corn last year; every ear was ripe—even the hogs were obliged to eat it as we had no *nubbins*, nor none that we sometimes call *hog corn*. They got along with it very well however, and no *serious* results attended its use. By the 20th May, the greatest bulk of our corn was planted. Our ground is fitted either by fall or spring plowing, usually at the depth of from four to six inches, harrowed and marked out one way with a marker. The machine made by Brown of Galesburg in this state, (and there is none better,) is drawn by two horses; the driver and dropper ride. This machine will plant from twelve to twenty acres in a day, and with the wheels roll the rows about a foot wide, thus crushing all the lumps, and do the work better than a man can plant half an acre a day with a hoe. Our season through has not been very favorable for a large crop. During the month of July and part of August, it was very dry. At the time of setting for ears, corn wants very favorable weather. If too dry, small ears are the consequence. We use no kind of manure for this crop. The cultivation is done wholly with the plow, harrow, and cultivator. We have no use for the hoe in raising corn. Probable yield throughout the North-west as near as I can gather from the most reliable sources, will be about twenty-five bushels per acre. Some and many fields will yield sixty and some eighty bushels. But there are many fields that wont yield ten bushels. As we are now paying fourteen cents a bushel for freight from Chicago to Buffalo, and about four cents per hundred miles on our railroads leading into Chicago, our corn is worth in the hands of the farmer from eight to twelve cents a bushel—cheaper than wood for fuel in some localities, and used as such.

We look for higher prices next spring. If the Erie Canal has moved 25,000 bushels of wheat and corn east daily, as is stated since May 1st, last, from Buffalo alone, nearly all of which is grown in the North-west, our cribs with our light crop of this year will be quite empty before long. And if the eastern officials will let our Gen. Fremont alone, he will have a Mississippi river for us to use by next spring, and then some of our produce will find its usual market south.

Potatoes.—As millions of bushels rotted last spring in the hands of the farmer for want of the Southern market as usual, but few were planted. Our season has not been favorable, and a light crop only is realized. Enough however for table use. We never feed them to stock.

Vegetables of all kinds, fair, though in no great abundance. Squashes and pumpkins very scarce, and poor flavor. Onions good—now selling for 15 cents per bushel. Of tomatoes, very few.

Apples—Our orchards have borne a fine crop of this valuable fruit this year. Some have a few hundred bushels to sell. Owing to the newness of our country and too much negligence of the farmer, there is not one in a hundred who has raised any; but in a few years more we hope the West can raise a good supply. Apples are now selling at the orchards at from 30 to 40 cents a bushel. At our County Fair, T. McWhorter, an old nurseryman and orchardist, exhibited 150 named varieties of apples, and D. J. Noble 120 varieties.

Sugar Cane.—Many farmers have their patch of this crop, varying from a quarter to twenty acres. The mills are now being drove night and day to work it up before cold weather. It is impossible to give any idea as to the probable amount of this crop. Enough however to tell well in the pockets of those who raise their own molasses. The farmer hauls the cane to the mill, and gives one-half the syrup to the manufacturer. C. G. Taylor.

ARRANGEMENT OF CATTLE STABLES.

Eds. Cultivator—In a building 30 by 46 feet I wish to make a double row of stalls for accommodating twenty cows. Will you give me the best plan for doing it? Is it best for cows to stand with their heads towards or from each other? For feeding the former would seem preferable, while for cleaning out the stable, and for milking, the latter claims advantages. What would be best for them to stand on the year round, a plank floor, or cement, or neither? I intend pursuing the soiling system, and wish feeding arrangements convenient, also those for saving *all* the manure, liquid and solid. Please answer the above inquiries in the next number of your valuable paper. A. A. U. *Clinton Corners, Duchess Co.*

It is best to place the stalls so that there may be two feeding passages—one on each side next the walls, and to have one manure passage in the middle—because it is much easier to give the food than to clear away manure, litter stables, &c., where they are kept as clean as they should be. In a small stable the wheelbarrow will do to carry off the manure—in a larger one a cart-way should extend through the middle, with doors at each end; the manure may then be taken directly to the land and applied at once. For the plan described in vol. xvii., p. 106, of the Country Gentleman, the mangers must be in the centre. In either case openings or shoots must be provided for throwing down the fodder from above, over the feeding passages, as well as others for the littering straw. Where straw is abundant, as it is on all grain-growing farms, plenty of litter will absorb all the liquid and keep the animals more comfortable. Where litter is scarcer, a trough must be made behind the cattle, wide enough to receive a square shovel to throw out the manure. Flagging is best—neat paving next, if plenty of straw can be used at all times. Hard burnt brick, on edge, make a good floor. Cement is apt to crack by freezing. Wood does well where straw is not abundant, as it may be easily cleaned.

[For the Country Gentleman and Cultivator.]

How to Make a Concentrated Manure.

A manure may be produced which will possess an equal degree of fertilizing power with the best guano, and at a much cheaper rate.

Proceed as follows: Construct your stables in such a manner that the urine from your stock, and particularly from your horses, shall be all emptied into a large reservoir, fitted up in your barn-yard. Into this reservoir or excavation, put *all the weeds and waste grasses*, &c., &c., of your fields or hedge rows, &c., or any other useless vegetable product—throwing over each layer as it is packed in, a *thin coating* of the following composition, viz.: sal ammoniac one part, and lime two parts. This is to be sprinkled on each layer of weeds, &c., of six or eight inches in thickness; and upon this, or upon *each of these layers*, is placed a thin layer of earth.

After your reservoir is filled, sprinkle over the top layer from time to time, a thin layer of common plaster of Paris, (sulphate of lime.) This will prevent the evaporation of the ammonia formed. Next, into your reservoir so filled, let all the urine from your stock gradually drain, so that it runs over and entirely through the mass. From six months to a year may be necessary fully to incorporate the materials; but when ready, 100 weight of this manure, mixed with common barn-yard manure, will contain more real vegetable sustenance than the same weight of guano. It may not appear so evident as the guano in the first crop, but its action will be increasingly manifest, while that of the guano is exhausting to the soil, by simply calling up nutrition from an indefinite depth, while it imparts nothing which its own action does not exhaust. As a general rule, "small grain," such as rye, wheat, oats and barley, requires a less *concentrated* manure than potatoes and garden vegetables generally; you can therefore vary by mixing with a lighter manure.

To Manure for One Crop.

For a single crop of wheat, rye, oats, &c., select any given grass field whose supply ceases to be remunerative. In the month of June pass through it and sprinkle over it sal ammonia and lime, two of the latter to one of the former, in powder, as you would plaster, but in less quantity. Then plow down the grass, taking care not to sprinkle too far ahead of the plow. After thus having turned the grass under, cover the whole ground with a light coat of plaster, and let it remain until the time of putting in the crop, when you may prepare the ground by simply passing a cultivator over it, and putting in your crop—which will produce in proportion to the time it has stood from the first plowing; a year, for instance, will be better than three months. Ever keep in mind that plaster has no other effect on the soil than to retain the nutritious eliminations, and prevents their escape into the air.

The above information will be valuable to those who need additional strength to their lands, upon which no patent has been issued. Solomon W. Jewett.

San Francisco, Sept. 5, 1861.

FARMING IN WAYNE COUNTY, INDIANA.

Brief Editorial Notes.

Making Sorghum Molasses.—The country surrounding Richmond is one of the finest and best cultivated portions of the West. In external appearance—in woods and fields, dwellings and outbuildings,—it would be scarcely distinguished from the more level parts of Western New-York—the fields of tall corn, being the first point of difference that a stranger would observe. The soil is very fertile and almost wholly free from stones. The forests consist largely of oak, beech, and maple, and at the present time are brilliantly variegated with the rich crimson foliage of the sour gum and the softer shades of ash, maple, and tulip tree. The leaves of the corn were killed on the 28th with frost—a part is topped and a part cut up at the roots. It is the most important crop, and the average product is greater than in New-York—or about fifty bushels of shelled corn per acre, sixty to seventy among the better farmers, and one hundred and thirty have been raised. Wheat is hardly as productive as with us—oats about the same. The usual rotation is corn, oats, wheat, grass. The manure made by animals is applied to the corn. It is not unusual to sow wheat among standing corn, and to cover it by running the shovel-plow between the rows, leaving the surface rough or ridged, but the best crops are not obtained in this way. Weeds generally are extirpated, and farms present a neat appearance. A few cornfields were observed as clean as a floor. Land is from sixty to one hundred dollars per acre, within two or three miles of Richmond.

A more general cultivation of the clover crop, for improving the quality of the soil, would add much to the profits of farming in the long run.

The forests present a heavy growth of good timber. A hundred cords per acre are not unusual.

I have visited a few manufactories of *Sorghum molasses*, conducted on a moderate scale. One of these employed three hands and one horse, and would make about 25 gallons in a day. Two horses would have made more. The stream of juice from the grinding-mill was about half an inch in diameter, and was of a light pea-green color, from the amount of small fibrous and other foreign matter derived from the stalks. The rollers were metal, and pressed the stalks so closely that they passed off nearly dry and like shavings. Cattle were eating a portion of this refuse matter. The fresh juice was boiled down in shallow pans. No substance was added—the molasses being simply boiled juice, well skimmed during the process. From one to two hours were consumed in thus changing the juice to molasses; the skimming being continued throughout. The scum is green, and consists of the fibrous and other matter already mentioned. One cord of wood makes one hundred gallons of molasses, and the whole process, after the stripped stalks are drawn to the mill, is performed for 20 to 25 cents per gallon. The wholesale price here is 50 cents per gallon—an acre will average about 200 gallons, and consequently will yield 40 dollars or more for the labor and expense of raising and harvesting,—the cost of the latter, including the previous stripping of the leaves, being the principal part, and about three times as great as harvesting common cornstalks. The value of the leaves for fodder does not pay the expense of stripping them off.

Another manufactory, belonging to A. Mendenhall, was of a cheaper character, being merely intended for his own private use. The rollers were of wood, turned accurately, and working with iron gudgeons, and having iron cogs on the ends of the rollers, to give the proper motion. The rollers are set vertically, as usual. The cost of this grinding apparatus, which is worked by two horses, was about 20 dollars. It grinds two or three cords a day. It does not press the juice out so closely as those with metal rollers, about one-fifth being left with the stalks, but it is purer, and has less of the green matter. As a consequence, less skimming is needed, and the whole process is completed in half an hour. As all are aware, the juice should be boiled when fresh—a few hours are sufficient to cause fermentation. The pans are home-made, and consist simply of sheet-iron with plank sides, the sheet-iron being bent up so as to form the ends of the pan, and are secured to the plank by two thick rows of nails—the fire-place is a little narrower than the pans. A cord of wood boils down the juice for 80 gallons of molasses. Last year, six gallons of juice produced a gallon of molasses—this year it is not quite so rich, and eight or ten are required. Sorghum which grows on dry and poor land, although smaller in crop, yields a richer and better juice—in some instances twice as valuable as that obtained from the more succulent stalks on moist and rich ground.

Much of the sorghum raised this year has been diminished in value by allowing the seed through carelessness to become mixed with broom-corn.

The molasses has a distinct flavor, unlike both maple and cane molasses, better than the latter, and inferior to the former, but much liked by those who have become accustomed to it. But little, so far as I could learn, is offered for sale in market, farmers generally making it for their own home use. *Richmond, Ind.*, 10 *mo.* 8, 1861.

[For the Country Gentleman and Cultivator.]

LETTER FROM NEW-BRUNSWICK.

Messrs. Editors—I wish you would as soon as possible, send me two or three posters. I want to send a larger list of subscribers to your publication, The Cultivator, than that of last year, and would therefore like to commence early in requesting names. It is scarcely necessary for me to say, that in my opinion it maintains its well won reputation of being the first and best agricultural publication in America, and not exceeded by any on the other side of the water. I do not farm to a great extent, but being in the country, and on a small rough farm of 50 acres, it is to my advantage to make the most of it; nowhere can I get such valuable and reliable information as from your paper. I would not, however, advise any one to take it and endeavor to carry out all the suggestions, for your climate, soil, &c., vary too much from ours to succeed, unless *common sense* and judgment are called in to assist. Of one thing, however, I am certain, that if any one capable of reading our language, will take either of your publications, read them attentively, and after mature deliberation, *practice* what is there told him, according to the situation of his farm, he will be a gainer. Besides that, there are many topics upon which your teaching is well adapted to our locality—such as draining, utility and advantages of root crops, suitability of buildings for stock, care and preservation of manure, &c., &c.

There is a great prejudice here, as everywhere else, among some farmers, against what is called book-farming, and no later than three days ago I heard one of the largest landed proprietors in this parish, railing in most unmeasured terms against it. Now in my opinion, and I doubt not in yours also, this is a subject where both *extremes* are to be avoided, and the *mean* adopted. It would be folly almost to expect any one to carry on a farm to advantage, no matter how well skilled in theory, in the knowledge of chemistry, and the results following the use of certain manures, unless a sober and sound discriminating judgment was at the helm to direct and control his actions. As in the professions, practice and theory must go together. Show me a sound, thorough man, who is alive to his responsibilities as a farmer, who appreciates agricultural education, and reads and digests good agricultural publications, and I will venture to say that he is a good farmer in every sense of the word. On the other hand, do we not often, and might I not say invariably, find that the opponents of what is called book-farming, are the very men who have no reliance on their calling—men who are always grumbling at the hardness of their lot, and the impossibility of making enough to pay wages. I do not, to tell the truth, wonder at such persons not being able to make anything off their farms, the way they, in their wisdom, manage matters; the only astonishment is that they are able to get anything from soil so much exhausted and so wretchedly managed. I am sure no other business or profession would stand so much neglect. If, however, such persons would adopt a few simple hints that a man perhaps without much actual experience of farm labor could give them, they would then find that the land is generous in its returns. A drain, for instance, through that lowest piece of ground at which the owner grumbles whenever he has occasion to go near it—from which, although the best piece of ground in the lot, he receives nothing, and *out of which* he has occasionally perhaps, and especially in the spring, to assist his cattle—a few loads of that rich black mud thrown either into his hog-pen or cattle-yards, dug at times when his other work is not pressing him, or perhaps when he would be lazing about the stove, would materially add to his corn crop or to the yield from his potato field—the use of a few battens and nails to add to the comfort of his cattle in the winter—these hints could be easily carried out, and would pay a large per centage on the trouble and little money required. But no, their fathers did not do so, and they will not.

I sat down to write but a few lines requesting the posters, and my letter, without being aware of it, has grown longer than I intended. I hope, however, you will *pardon* this—as the school-boys say, I won't do so again. In for a penny, however, in for a pound—as I have a little space left, I will tell you somewhat about our Provincial Exhibition, held in Sussex Vale, Kings county, last week. The building was erected upon Col. Evansens' property, in a beautiful spot surrounded by large elm trees. After the reading of an address by the Hon. A. E. Botsford, Chairman of the Agricultural Board, and the answer of His Excellency the Governor of the Province, the Exhibition was declared open. The weather was most propitious—such weather as we often have here in October—and thousands availed themselves of the opportunity offered by low fares, of visiting the place. The building itself is a parallelogram 170 by 72, the height 45 feet. The front is ornamented by a representation of Brittania, surmounted by the Union Jack; representations of the four seasons, also of Agriculture, Commerce, Science, and the Arts, in compartments, formed by Corinthian columns, add greatly to the effect, and prevent a sameness in appearance. As you, however, are at a distance, and do not take that interest in it which we *natives* do, I will mercifully withhold a detailed description of the buildings. It would be impossible to describe the articles—all branches of industry were well represented. The forest, the field, the forge, the loom, all sent their contributions; nor were other manufactures behind in their efforts to render it a credit to the Province at large. I assure you we New-Brunswickers are gratified with the display. The Exhibition comprised articles in Agricultural, Horticultural, Industrial, and Native Departments; the latter embracing stuffed animals, birds, shells and fossils, woods, minerals, ores, paints, rocks, &c. I would here call your attention to the production of one article, for which, strange to say, we depend solely upon our neighbors in the West—I mean wheat. One sample weighed 64 lbs. to the bushel—yielding 23 bushels to the acre. The States of New-York and Ohio, I believe, do not average more than 21 bushels. With reference to the grain-growing portions of Canada, the yield is still more in our favor.

The display in the Cattle Grounds, though not large, was extremely good. Short-Horns, Devons, and Ayrshires, were well represented. South-Downs, Leicesters, and Cotswolds, were all to be seen, and of these there were some good specimens. In the pig line, we had the large nameless variety, the Suffolk, Essex, Berkshire, Small Yorkshire, with crosses upon the old stock, forming as good a collection as one would wish to see. The display of horses was good—this, in a measure, owing to importations recently made from your section. While the horses were being exhibited, a plowing-match was going on in the adjoining field—here the work was well and thoroughly done.

I was much gratified at meeting with gentlemen from the State of Maine, who had been invited by the Board to act as Judges, among whom were the Messrs. Anderson of South Windham and Portland, Mr. Goodale, Secretary of the State Board of Agriculture, and Col. Perley; others were present with whose names I am not acquainted. Mr. J. F. Anderson is the Maine breeder of Devons; his gentlemanly bearing, courteous and affable demeanor, have made him many friends. C. P. B.

Kings County, N. B., Oct. 12, 1861.

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[For the Country Gentleman and Cultivator.]

Is Farming Profitable---Or Does it Pay?

Editors Cult. and Co. Gent.—The above questions have been largely discussed of late in the Agricultural Journals—at State and County Fairs, and among farmers and others, "where two or three have met." The conclusions arrived at by different individuals are quite dissimilar.

Money and labor invested in lands and agriculture, are like capital and labor employed in mercantile, manufacturing, and mechanical pursuits. In these some succeed, and accumulate large fortunes; others fail. In agriculture, more especially in the New England States, the liability to bankruptcy is less among farmers than among some other classes, and the chances of accumulating a large fortune is also less. But as far as a comfortable living and pecuniary independence is concerned, taking into account the relative numbers engaged in different pursuits, I am strongly impressed with the belief that farming is the safest business; and whether this or that individual makes his farming pay, depends upon a great many circumstances, some of which will be found *put down* in the subjoined letter.

Cost and Profit of Certain Crops.

Being at Concord, N. H., not long since, I called upon Joseph B. Walker, Esq., one of the prominent farmers of that town. The question respecting the profits of farming was introduced, and to illustrate the correctness of some of his statements, he referred to his farm accounts and diary, where the "outgoes and income," or the actual cash expenses and receipts, are kept with the same degree of accuracy as though he was dealing with an individual, instead of his farm. The expense of every crop is also kept, and in fact everything connected with his farming operations. By carefully pursuing the above system, he is enabled to ascertain the profit and loss of his eight years farming, and also to know what crop pays the best for the outlay or cost of cultivation. No doubt it will surprise some of the prairie farmers, to learn that the most profitable farm crop grown here, under favorable conditions, is that of Indian corn.

But to Mr. Walker's letter, dated,

Concord, N. H., Oct. 11th, 1861.

"Friend Bartlett—We were discussing the other evening the oft repeated question, "Does farming pay?" &c. I regretted you were obliged to leave us so early.

I have thought of it several times since. It is not one of the questions we can answer generally and for every one, yes or no. Whether farming does or does not pay, depends, I think, upon various circumstances, as the character of the farmer himself; his skill and general business ability; the condition of his land; his location as to markets, as well as some other conditions, which might, if necessary, be adduced.

"I think it pays me, and for evidence of this assertion I give you the following estimate of the costs of production of three of our leading crops, viz: Corn, Oats and Hay. They are based upon the supposition that labor costs one dollar per day, and manure four dollars per cord, the ordinary market price in this place; and that the average yield of corn is 50 bushels per acre, of oats 50 bushels per acre, and of hay 1½ tons per acre. They are also presented in the common eight years rotation of corn one year, oats one year, and grass six years. The sum of the three estimates being the estimate of this eight years rotation. I would also remark that while any good farmer's labor is cheap at one dollar per day, he can make his manure at a cost less than four dollars per cord."

In the following estimate, it will be seen that he charges one-eighth of the expense of the "breaking up" the sod land, and one-quarter of the manure, drawing out and spreading and harrowing, to the corn crop; the balance is taxed to the oat and hay crops.

Cost of One Acre of Corn One Year.

⅛ expense of breaking up one acre of ground,	$0.75
¼ cost of 10 cords manure, at $4 per cord,	10.00
¼ expense drawing out and spreading manure,	1.50
¼ expense harrowing and plowing in manure,	50
Seed and planting,	1.00
Hoeing three times (actual expense 1861,)	6.67
Cutting stalks,	2.50
Drawing and storing stalks,	1.00
Husking and storing corn,	4.38
Cutting and storing butts,	2.00
Shelling (50 bushels,)	2.50
	$32.80
From this deduct 2 tons of corn fodder, at $4 per ton,	8.00
and there remains as cost of 50 bushels shelled corn,	$24.80
making the cost per bushel 49 3-5th cents.	

Cost of One Acre of Oats One Year.

⅛ part expense of breaking up the ground previous year,	$0.75
¼ expense of 10 cords manure, drawing out and spreading,	11.50
¼ expense of plowing in and harrowing,	50
Plowing twice and harrowing after corn and before sowing,	3.50
Two and a half bushels of seed oats,	1.25
Sowing and harrowing,	75
Cutting and stooking,	5.00
Hauling into barn,	1.00
Threshing estimated yield of 50 bushels of oats at 6 cents,	3.00
	$27.25
From this deduct 1½ tons straw, at $8 per ton,	12.00
makingthe cost per bushel 30½ cents.	
	$15.25

Cost of One Acre of Grass Six Years.

¾ expense of breaking up ground,	$4.50
½ expense of 10 cords manure,	20.00
½ expense drawing out, spreading and harrowing in manure,	4.00
Grass seeds, sowing, harrowing, &c.,	2.00
Cutting, curing and housing 9 tons of hay (1½ ton per year,) at $2.50 per ton,	22.50
Cost of 9 tons of hay,	$53.00
Or, $5.88 per ton.	

"I believe (says Mr. W.) the above estimates to be pretty accurate. Indeed they are for the most part drawn from records of cost of these crops, entered in my Farm Journal from time to time for my own guidance. I don't think you will find the expenses under-stated, or the crops over-estimated. It is plain that corn at 49 3-5 cents per bushel, oats 30½ cents, and hay at $5.88 per ton, each pay a profit, provided they are disposed of at the ordinary market price here. At some other time we will figure out the cost of rye, potatoes, barley, &c.

"So far as these estimates go, they answer the question to me. Others perhaps are doing much better than I am, getting better crops and at a less expense; while others still may not be doing as well. The question, 'Does farming pay?' is one every farmer should answer for himself, and from his own figures, and then he will know whether or not it pays *him*. J. B. WALKER."

From the estimates here presented by Mr. W., it will be seen that the profits on an acre of corn of 50 bushels, at $1 per bushel, (the average price at Concord and vicinity for the past six years,) amounts to $25.20. If I am any judge of the yield of corn, as seen in the field, Mr. W.'s crop will yield at least 70 bushels per acre this season. If so, then the net profit will be over $40 per acre. The profit on the oat crop—50 bushels per acre at 50 cents per bushel, amounts to $9.75. His hay, of which he sells a large amount annually, averages $15 per ton—1½ tons per acre, $22.50; deduct cost, $8.82, leaves a balance of $13.68, as annual profit, per acre for six years. But I am satisfied that he greatly under-estimates his yield of hay. The past season he had acres of grass that was fully satisfactory in point of yield. He would not have thanked any one to have added a single spire to his crop.

It will be seen that Mr. W. charges $2.50 per ton for cutting, curing and housing a ton of hay. By referring to some of the recent back numbers of the Co. GENT., we find estimates by several writers on the cost of cutting and securing hay—some making the expense at about 75 cents per ton, and from that all the way up to $2. It is not within my province to reconcile these differences. Mr. Walker has within his reach, every *possible condition* of securing his hay crop that the most favored farmer has—an hundred acre mowing-field, almost as level as a house floor—not a rock, stump, or any obstruction, except lodged grass. He has good and large horses, oxen, hay-carts, mowing-machine, horse-rakes, &c., &c., and his barns stand but a few feet higher than his mowing-fields.

The farm of 320 acres has now been owned by the Walker family for 131 years. The present owner, (J. B. W.) being of the fourth generation from the original proprietor, the late Rev. Timothy Walker, who was one of the original settlers of Concord, and as such received a proprietary share of the lands of the township. He was the first and only settled minister of the town for fifty-two years—being ordained in 1730 and dying in 1782. From him, the farm became the property of the late Judge Timothy Walker. Upon his decease, it fell to his son, the late Capt. Joseph Walker, who died in 1833, leaving the farm to his only son, the present proprietor, then ten years of age. For the succeeding twenty years the farm was rented to tenants, and as a matter of course, the buildings and fences became much dilapidated, the fields overrun with bushes, and the farm in every way declined much in condition and productiveness. During the time, Mr. W. received a college education, graduating at Yale College in 1844; studied law, and was admitted to the bar in 1847. But wishing to keep the "Old Homestead" in the family, in 1853 he turned his back upon the "legal profession with all its subtleties," and became a farmer in good earnest.

With sound judgment, skill, perseverance, and abundant cash capital, with a generous outlay of it, he has in eight years wrought wonders by way of improvement upon the farm; and what is quite satisfactory, the balance sheet shows the cash sales from it more than covers the expenditures, so that henceforth he believes he can sell one hundred tons of hay annually, and keep from 30 to 40 head of cattle, 2 horses, and from four to six swine, and still keep up and increase the fertility of his lands—the growth of stock and other proceeds of the place, (aside from the hay sold,) covering all expenses of carrying on the farm; the proceeds of the one hundred tons of hay sold being the net annual income of rent or interest derived from the cultivated and grass portions of the farm. And from a pretty close investigation of the matter, I have no doubt of the correctness of his belief.

By the drainage of two ponds on his intervale, it has pretty effectually drained 25 to 30 acres of formerly wet land, and given him easy access (at almost all seasons of the year,) to inexhaustible beds of the finest muck for composting, the value of which he fully understands.

Soiling Cattle---Liquid Manure.

In a note to his letter of the 11th he says—"I last week spent an hour or two at Hon. JOSIAH QUINCY's farm, and saw his splendid farm, stock, &c. His is the best conducted and most reliable experiment of soiling we have had in this country, and will well repay the careful study of any good farmer."

A few weeks since I received a letter from Mr. Quincy jr., in which he incidentally remarked:—

"My system of soiling gives me a vast amount of manure, both solid and liquid; and I find that dry peat muck saturated with urine, is far stronger than the solid excrements of the cattle. I mention this to show that I have no fear of exhausting my land by any crop I may raise. I shall keep one hundred cows this winter."

After so many reliable statements, made by competent and disinterested farmers, of the manurial value of the liquid excrements of farm stock when taken up by dry muck, or other good absorbing material, and when the truth of its value is so universally acknowledged by nineteen-twentieths of our practical farmers, "it is strange, passing strange," that so few of them take any measures to guard against this great leakage, and will freely pay away their money to purchase superphosphates and other commercial manures, without its once entering their thoughts that by so doing they are "saving at the spiggot and losing at the bung." Levi Bartlett.

Warner, N. H., Oct. 18, 1861.

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[For the Country Gentleman and Cultivator.]

Steaming Apparatus---Hints about Stables.

Messrs. L. Tucker & Son—In your esteemed paper I have noticed several inquiries from parties wishing the best plan for a steaming apparatus for steaming food for milch cows and fattening cattle, and having found one in practical working, have deemed it would be very acceptable to yourself and a large number of readers. I deem it also nearly perfect, and I do not know of any improvements that I could make. I would premise by stating that I found it on the farm of Mr. Smith Lewis, two miles from Madison, in this State. Mr. Lewis and father are farming some two hundred acres—usually milk some fifty cows, sending the milk by railroad to either Newark or New-York.

The steam-boiler for generating steam, is at some distance from the barn, to avoid all danger from fire—the steam is carried in half-inch iron pipes, I should say 150 feet, to the steaming-box.

His barn and stable is what is called a side-hill barn, in the form of an L. The hay, straw and stalks are cut by horse-power in the upper part, where they cut enough one day to last several.

Mr. Lewis' steaming-box is made of two-inch pine plank, six feet in each direction, length, width and height. It is attached to the upper floor of the barn in such a way that its top comes about three feet above this floor, which brings the bottom of the steam-box about four feet above the floor below. The top of the box contains a trap-door through which the feed to be steamed is put. There is a false bottom in the interior of the box, one or two inches above the real bottom, and filled with augur holes. The steam enters beneath this bottom, and is diffused through the augur holes into the contents of the box above. Upon the side of the box, just above the false bottom, there is a door hanging upon hinges, of the full length of the box, (6 feet,) through which when raised, the cooked feed can be withdrawn. The object of having the bottom of the steam-box elevated as it is, above the lower floor of the barn, is to admit of rolling underneath it a box upon small wheels, into which the cooked food is drawn from the steam-box, and where it remains to cool before it is fed to the stock.

Mr. Lewis' method of cooking is this—if he cooks meal and hay, he first puts into the box a quantity of cut hay, then meal, then puts on enough water to wet it, then another layer, &c., until the box is full; the cover is then tightly placed, and the steam let on. He uniformly wets the mass—as he found that there was not moisture enough unless well wetted—before steaming; when not wet, the steam seemed to dry it still more, and burn not cook the mess. I understood him to say that he tried steaming roots—turnips, &c.,—but soon gave it up as unsatisfactory. The writer thinks he understood him to say that they either did not eat them as well, or did not do as well on the cooked roots.

Another word of caution to those about fixing up a box for steaming food. At the time of my visit, the steam-box was in the basement, and in the same room as his milch cows, and this he found highly objectionable on the score of health, for in winter a very large amount of steam would escape into the room—already surcharged with moisture from the breath of the cattle—and the additional steam made it much too damp, impairing the general health of the animals. He spoke in particular of this, cautioning me against the evil, and said he should make some change.

The writer greatly regrets his inability to give you facts as to the advantages of feeding steamed food, now that he is on the subject of steam boxes, but he will promise to gather the experience of others and state the difference.

I would say one word to those who are constructing stables for milch cows and all cattle.

There is only one way in which stabled cattle can be kept clean, and that is in stanchions. Three feet from centre to centre is quite enough for heifers and small cattle; three feet and four inches, or six inches, for large cows and cattle is the correct distance, and this gives ample room. But the platform is important, and its length should depend on the length of the *animals.* Some writers advise and say four feet four inches is the correct distance—and on the same principle, why do not these men advise all coffins or boots made of one uniform length—as though a small cow wanted as great a length as a big ox. Now, sir, I have cows whose length of platform should vary from four feet two inches to five feet two inches; and I think that in making a platform it should at one end be four feet two inches for the small cows, and extend to five feet at the other; thus you would have a platform to accommodate different sized animals. If the animals are medium size, four feet four inches is the best length—of this length, their droppings will fall into the gutter. This should be two feet wide—not less than 20 inches, and six inches to eight inches deep—water tight, with a fall of one inch in six feet, or eight. The walk behind the cows should be four feet, elevated like the platform, or two inches higher. I prefer the same height. The stanchions should be very strong and substantial. The manger two feet; the space for feeding in front of the cows, if in a single row, six feet—if a double row of cows, twelve feet; or in other words, if the barn is designed for a double row of cattle facing towards the centre, it should not be less than forty feet wide, and the stable *ten feet high.* If a barn for a single row of cattle, it should not be less than twenty-five feet wide, and the higher the purer the air. The manure gutter two feet wide and water tight, the urine runs outside on to the manure and mould heap; the manure is easily *pushed* out of *the stable.* The gutter made water tight and capacious, is the place to deposit muck and turf, and when saturated, easily pushed off into the manure heap. The place for the manure wants to be basin shaped, covered, and water tight, retaining all the liquids and solids until carted away; and such is the writer's. But I must close. "Old Hurricane." *Jersey Farms, N. J.*

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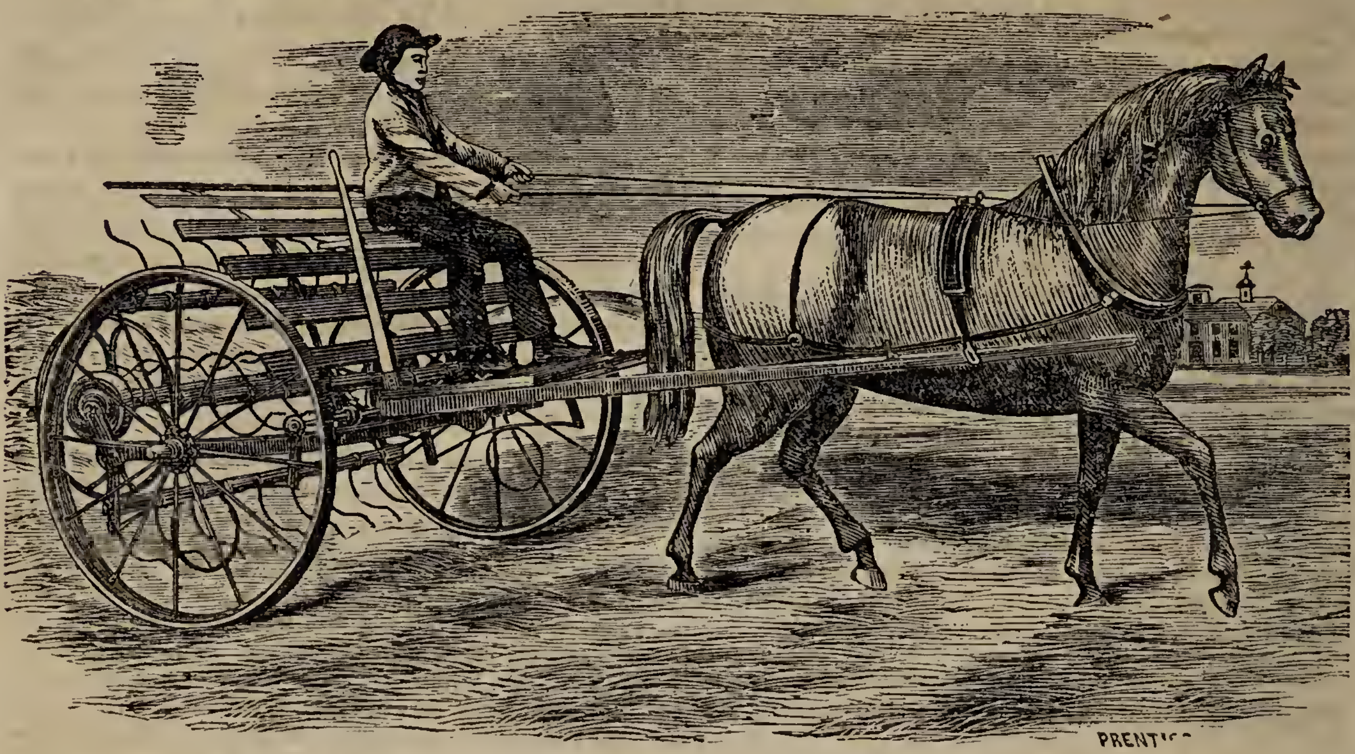
Export of Breadstuffs.—The following table exhibits the exports of breadstuffs from New-York from Jan. 1 to October 23, for the years 1860 and 1861:

	1860.	1861.
Wheat Flour, bbls.,	1,380,491	2,220,310
Rye Flour,	7,291	9,561
Corn Meal, bbls.,	76,956	96,004
Wheat, bushels,	8,696.628	19,571.748
Corn. bushels,	2,252,960	9,648,109
Rye. bushels.	450	585,386
Barley. bushels,	8,280	1,060
Oats, bushels,	102,508	147,734
Peas, bushels,	103,401	250

☞ During the last week there were exported from New-York to Europe 1,377,546 bushels of grain and 82,524 barrels of flour, estimated to be worth two and a quarter millions of dollars.



STODDARD'S HAY TEDDER OR HAY-MAKING MACHINE.

We give above an engraving of the Hay Tedder patented and manufactured by Mr. J. C. Stoddard of Worcester, Mass. Its object is to follow in the wake of the Mowing machine or Scythe, and make or cure the hay by throwing it up to the sun and air nearly as rapidly as the mowing machines cut it, doing the work of from eight to twelve men, thus saving 90 per cent of manual labor, and in most cases, with a good sun, enabling the farmer to cure his grass sufficiently to be secured the same day. The wheels of the mowing machine press a portion of the grass tight into the ground; the tines of the Tedder pick it all up and leave it light and loose.

The inventor claims for his machine the following advantages over those in use so commonly in Great Britain:—

1. It is only about one-half the weight of the English; the English machine varying in weight from ten to thirteen hundred pounds.

2. It is much more simple and mechanical in its construction, composed of fewer parts, and less likely to get out of order.

3. The manner by which the reel is turned may be said to constitute the novel feature of this invention, by which the practical working of the machine on all grounds, rough or smooth, is rendered a complete success, viz., by friction. The great advantages obtained by driving by friction are two-fold: 1st. The friction rolls will yield or slip on their bearings when the tines strike an obstruction, thus checking the momentum of the reel, and preventing the breaking of any of its parts; 2d. The friction rolls, by means of the hand lever, are thrown alternately on and off the bearings with perfect safety to the machine by a careless operator.

4. The height of the tines from the ground is regulated in a moment of time by the hand screw, front.

5. The reel can be elevated when passing over an obstruction or through a ditch, instantly, by bearing on the hand lever; a convenience which no other machine possesses.

6. There is an easy spring seat to sit upon; the English has none.

7. One horse works this machine without difficulty, doing nearly the same work of two on the English, it being much lighter of draft.

8. Another important feature is the peculiar form of the teeth, with a boss or swell presented to the grass, which prevents the grass from winding on the reel.

9. A lad will do the work of from eight to ten men in turning or making hay after the grass is cut.

10. When the grass is wet, the water can be switched out of it effectually by passing over it with the Tedder, leaving it lighter and looser than can possibly be done by hand.

MAKING PORK.

In one respect, farmers commonly show the worst of their management in fattening hogs. These animals appreciate and enjoy cleanliness, yet their owners make them live in dirt, and then charge them with a fondness for filth. This is oppression and slander combined. Every person familiar with their habits, knows that when clean straw beds and other comforts are given them, they are scrupulous to keep them clean. When shut up in a narrow pen, where they must eat, sleep and live in one apartment, they cannot but be uncomfortable; and such a condition greatly retards their thriving. A "hog pen" has become proverbially a repulsive place; this is the owner's fault, and should never be suffered. There is no reason why it should not be neat and attractive. We hear farmers who raise grain say they have more straw than they can use, while at the same moment their fattening hogs have not enough of it to make a dry and clean bed.

Animals can never thrive well unless kept clean. The rule applies to swine as well as to horses. Every one knows that a well groomed horse is better than a neglected one with a shabby coat. Nearly the same result has been found when this treatment is applied to swine. Let every manager lay down this rule, that *a hog pen should never be distinguished by its odor twenty feet distant.* The sleeping apartments should be separate, and be perfectly clean and dry. The other portion should be cleaned out at least twice a day, and the manure at once mixed with muck, loam, coal ashes, &c., to make compost and destroy the odor, which is as injurious to the health of swine to breathe, as it is to men and women. It is not necessary that a piggery should cost five hundred dollars that it may be kept in splendid order; a cheap and simple structure may be subjected to the most perfect system of cleanliness. The satisfaction it will afford to the owner, the comfort to the occupant, and the profits to the purse, will be a three-fold compensation.

Horticultural Inquiries and Answers.

Cultivation of Asparagus.

Will you or some of your correspondents, give an article on the cultivation of Asparagus? Time to sow—method of making the bed, and its subsequent cultivation. I presume it has been treated on in your columns, but not to my recollection since I have been a reader of your valuable paper. J. W. *West Rupert*, *Vt.*, *Oct.*, 1861.

The giant asparagus is best—it is not a distinct variety, but the common sort made large by plenty of manure and good cultivation, and especially by not planting too thickly. The plants are raised from seeds, planted just like an onion bed, and set out finally when two years old. Strong one-year plants, are better than stunted two or three year ones. They may be had of most nurserymen, at a cheap rate, and thus save time. Set them out very early in spring—if set in autumn, they may perish in winter. The ground should be made very rich—beds are usually dug two feet deep, and then made about half manure—which is well enough, if plenty of room is given to the plants—but a bed a foot deep, with ample space for the rows, is better than a crowded one three feet deep. Expose the roots to the air as little as possible in setting them out; they should be set by a stretched line, in a spaded furrow, with the crowns of the roots about two inches below the surface. It is common to set them in rows a foot apart, and less than a foot in the row. We should prefer a foot and a half apart, or even more, and not nearer than a foot in the row. Sow salt at the rate of twenty pounds or so to the square rod, and rake in or let the rains carry it in. Keep clean of weeds—cover late in autumn with three inches of manure, to be forked in early in spring, taking care not to injure the plants. In three or four years, they will be in full vigor, and will last 12 or 15 years. Top-dress every autumn as already described; cleaning out weeds, hoeing, &c., will keep the bed from thus rising too high. Cut the shoots when about four inches high, and do not continue cutting after early summer.

Plums for Drying and Preserving.

I wish to inquire which of the several varieties of the Damson plum is most profitable to grow for preserving purposes, and which the least troubled by curculio?

Middlesex County, Mass. OLD SUBSCRIBER.

Thick-skinned plums are most likely to escape the curculio, and in this respect nothing is equal to the old *German Prune*, which is a very hardy tree, growing well in nearly all soils, and it makes a good drying plum, but not so rich and delicate as some others. *Prune d'Agen* is a much better plum in flavor, but the tree is a moderate grower, and it has not been extensively proved as a prune. The *Italian Prune* or *Fellenberg*, is an excellent plum of this class. The great hardiness and vigor of the *Monroe Gage* may render it valuable for drying. The same remark, especially as to hardiness of the tree, will apply to the Schenectady Catharine. The Saint Catharine of Europe, is largely raised in France as a prune. The common blue Damson, the English Shropshire Damson, and the winter Damson, are all very productive, but rather more liable to the black knot than other sorts. The Frost Gage proved a very valuable and productive late plum, until the knot became so troublesome upon it. Our correspondent will see that each sort has its good and bad points, and he must select, according to his preferences.

Securing Celery.

A Subscriber will be much obliged by plain directions for securing Celery, so as to keep during the winter. Mice and frost are his great enemies.

Delaware County, Penn., 10 mo. 10, 1861.

For common family use, it is best to let it remain where it grew, and to cover it. It is difficult to take it up, without more or less injury. To facilitate covering, dig a pretty deep trench for it to grow in—let it be in a sheltered place, where winds will not sweep off the covering, nor cause deep freezing. It must be covered deep, as freezing will spoil the celery. There are three materials for covering,—fresh manure, (which may be used for other purposes when spring arrives,) sawdust, and forest leaves. The latter are best, but need some protection on each side, (as for instance a row of pea-brush stuck into the ground,) and a covering to hold them from blowing away.

Where the subsoil is not fertile, the trench in which the celery is set, should be three feet wide, and three or four inches of old manure spaded and well mixed in before the celery plants are set out, in order that the roots may have a good chance to grow. If a stream of water could be occasionally turned into this trench, to fill it a few inches, it would accelerate the growth.

Grape-leaf Galls.

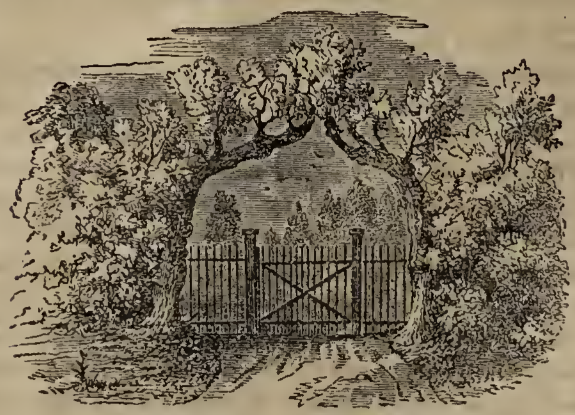
Can you tell me what insect it is that deposits its eggs in the leaves, young shoots, or tendrils of the grape-vine, thereby causing bunches or tumors like the enclosed specimens? It is mostly done in the early part of summer, but a few are laid in autumn. Have they ever been known to do serious injury to the vine? If so, what is the best remedy? OLD SUBSCRIBER. *Middlesex*, *Mass.*

This insect is the grape-leaf louse, (*Pemphigus vitifoliœ* of Fitch,) and is briefly described in Dr. Fitch's Third Report of Insects of New-York, page 79, and in the Transactions of the New-York State Agricultural Society for 1854, p. 862. We are not aware that it has ever done any serious mischief.

DEGENERATION OF SORTS

The way that varieties of the strawberry degenerate, is pointed out in the following extract from an article in the *Prairie Farmer*. The same reason will apply to many other things—the high culture which costly plants are apt to receive, producing the most satisfactory results, until they become cheap and abundant, and as a necessary consequence, receive total neglect:

There is one way that it appears to us this degeneration matter is brought about, and if so, it is not so much from the inherent tendency to deteriorate, as to the less and less care given in the cultivation of an old, and therefore cheap kind. We will endeavor to illustrate in the case of Wilson's Albany. For the last few years, immense demand has existed for this highly extolled berry. Those at all conversant with the subject, know that plenty of room is requisite to get the greatest quantity of runners from a given number of plants—the sale being perfectly sure, all dealers give this room; the consequence is, while the plants are worth say $10 per 1,000, all are fine large plants, and give a fair crop, even the first year after planting. Such plants tell their own story, and the demand continues. In a short time, prices come down, and the supply abundant and beyond demand, the dealer no longer thinks it worth while to give this room *expressly for the growth* of plants; the beds take care of themselves, hence bear but little, and the plants furnished are always weak and spindling. These require the second year to fruit; perhaps in the interim new kinds are pressed into notice, and frequently the other more and more difficult to obtain strong, until the cry is raised that the once celebrated strawberry has run its race. Now the question is, whether the same kinds under the same circumstances, that is strong runners from strong old plants, in good soil and plenty of room, will not continue to be productive.



ARCHED GATEWAY.

"In the Register for 1858, p. 29, is a representation of an arched gateway made of living trees. What trees are best for this purpose, and how is the arch made? C. C."

The engraver made the arch, figured in the Register, (and which we give above,) too irregular—there is no difficulty in making it symmetrical. When the trees are small, place a stake beside each, and secure it in several places, by straw, rush, or bass bands; the stakes should be as high as the perpendicular part or posts. Then fasten two curved poles to the upper end of these perpendicular posts, and secure them together in the middle, so as to form the proper arch; a single pole is best, if the right curve can be found, which is not difficult if the selection can be made in the woods. Tie the upper portions of the young trees along this curved part, so that they may meet in the centre; at this point inarch them, by cutting away a small portion of the bark, and tie them together with a rubber strap, that will give as they grow. (Such straps may be had in most dry good stores.) Keep all to their places a few years, and a perfect form will have been secured. If at any time they are apt to grow distorted, they are easily brought back while the trees are small. Unless a pretty stiff curved pole is placed across the top of the upright stakes, an additional stiffener will be needed in the form of a straight horizontal cross pole, to keep the uprights in position.

Any tree, having a tough hardy wood, will answer. Oak, if well trained, looks best for any large or massive gate, but it grows slowly, and on the other hand lasts long. Beech and birch both appear well. Elm is the most easily trained, as it has a natural form very similar to that of the sides of a gothic arch—the only objection is its massive and luxuriant foliage, almost concealing the form of its limbs, and its growing beyond bounds. It would do well for a high and spacious arch.

This kind of arch is very easily made—a few hours of labor in the aggregate will accomplish the whole; and it has a fine effect in any secluded place—in the rear of a dwelling, or the distant part of a garden; and for a small and rustic dwelling, it will do to place it near or in front.

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Post and Rail Fence—Inquiry Answered.

"I observe in your notes on Cayuga County Farming, (p. 202,) you describe a post and rail fence, costing only 80 cents a rod, and having the advantages of a straight line possessed by a good board fence. You say the posts may be bored by hand on rainy days—will you tell me how this is done? A Reader."

The auger should be about two and a half inches. It should be set in the end of a wooden shaft, about three feet long. An iron band should be placed on this end of the shaft, so that the auger may be wedged firmly. A fly-wheel, to make the auger work with force, should be placed on the shaft—it may be a small wagon-wheel or a grindstone. On the other end of the shaft must be a stout crank or handle for turning it. The whole must be set on a suitable frame 2½ feet wide, that it may be turned like a grindstone. The grindstone or wheel must of course be well wedged on, so as to turn true. On one side suitable blockings must be made to hold the post; and on this side of the frame two or three notches or sockets should be made to receive the shank of the auger, so that the latter may be shifted to bore an oblong hole, without moving the post. The other end of the wooden shaft is rounded at the proper place to turn in the socket or notch on the other side of the frame. This rounded part should be as much longer than the thickness of the frame as the post is in thickness, so that the auger will move in cutting through. It is best to have the frame slightly inclined, so that the weight of auger, shaft and fly-wheel, will tend to drive it downwards through the post. One man holding the post, while the other turns the crank, the boring is rapidly performed. The men change work, as each one becomes fatigued.

In constructing this kind of fence, procure timber both for rails and posts, that has been cut and split in summer, and it will last much longer.

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GAS TAR FOR POSTS.

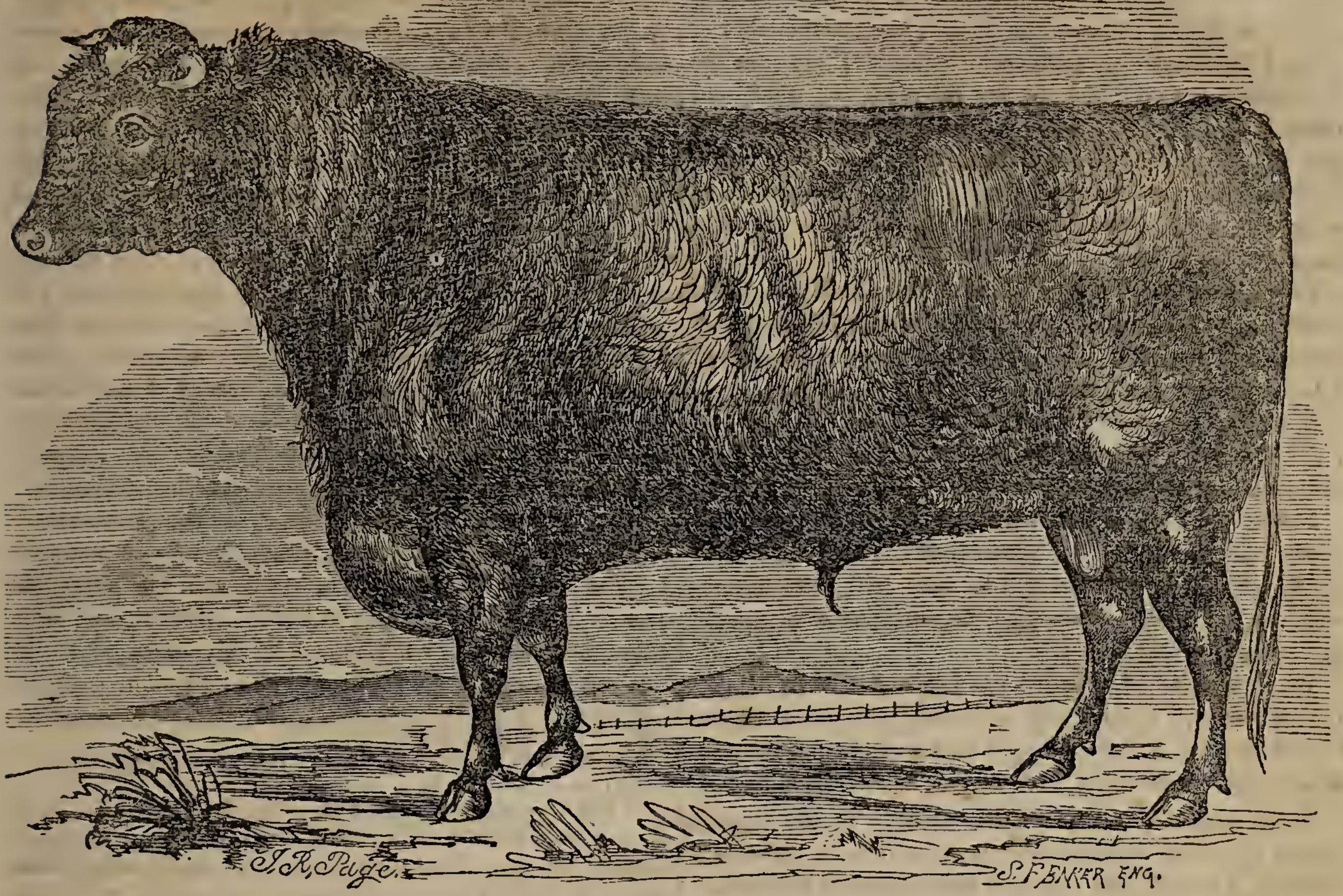
Eds. Co. Gent.—Hoping to elicit information of value to myself and the rest of your numerous readers, I venture to propound a few queries respecting *coal* or *gas tar*, which can be obtained here for one cent a gallon, and would therefore be within the reach of all, if it is available for paint.

1st. S. E. Todd, in the "Young Farmer's Manual," page 176, recommends a mixture of pitch and coal tar, applied hot to fence posts, for preserving them. How expensive is pitch? How much does it require? What is the mixture to be melted in, and how is the vessel used to be cleaned? What is it to be applied with? Whence the necessity of applying warm?

2d. In Webster's Family Cyclopœdia, section 234, it is stated that "gas tar, with yellow ochre, makes a very cheap and durable green paint for iron rails and coarse wood work." Have you ever seen this tried? Must it be applied warm?

3d. Is there no way of overcoming the unpleasant odor of gas tar by mixing it with some disinfectant? If so, how and what? Ruricolist. *Geneva, Oct.*, 1861.

We have never made the mixture of pitch with gas tar, and do not see the necessity of it. We have used gas tar alone, and have found it of great value. For example, a wooden trough on runners for receiving and drawing away the contents of a privy, entirely rotted in a year or two. Another well coated with gas tar was sound after ten years. The wood was thoroughly seasoned to open the pores, and successive coats of the tar, made as hot as was safe against taking fire, were applied. The object of heating is to reduce it to as liquid a state as practicable, that it may more freely enter the pores. We have no doubt that posts might be rendered extremely durable by first filling a large potash kettle with the tar, and after carefully heating it place the lower ends of the posts, after they have been very thoroughly seasoned, in it for a few hours each. We have not used the mixture of gas tar and ochre. Warming it would probable make it flow more easily. The bituminous odor cannot be neutralized by any practicable mode.


J. R. Page.
S. F. BAKER ENG.

SHORT-HORN BULL "APRICOT'S GLOSTER"---2 YEARS OLD.

Apricot's Gloster, 2500—bred by S. P. Chapman, Clockville, Madison Co., N. Y., the property of GEORGE BUTTS and H. CASS, Manlius, Onondaga Co., N. Y. Red, calved Jan. 15, 1858—got by Duke of Gloster (11382)—dam, Apricot by 3d Duke of York (10166)—g. d. Anna, by 4th Duke of Northumberland (3649)—gr. g. d. Anna, by Short Tail, (2621)—gr. gr. g. d. Acomb, by Belvidere (1706)—gr. gr. gr. g. d. from the herd of Mr. Bates.

Agricultural Statistics in Tompkins County.

Much has been said of the interest and value of AGRICULTURAL STATISTICS. There could be few better illustrations of both, than can be found in a chapter contributed by our friend EZRA CORNELL, Esq., of Tompkins County, for the forthcoming volume of the State Ag. Society's Transactions, upon the Statistics of that County as gathered by him last year with the aid of several careful assistants. These statistics were alluded to by Mr. C. in his remarks during the third evening's Discussions at the late Watertown Fair, and since the publication of a sketch of the statements there made by him, (see page 233 of this vol. Co. GENT.,) we have been intending to refer to the subject more particularly. Among the results of his labors which were at that time mentioned, was the calculation he was thus enabled to make of the capital invested in farming in the County, and the interest it actually yields to the farmer under present systems of management. This would alone reward the efforts which the statistics had cost, because it proves the pecuniary return which may be anticipated in the pursuit of Agriculture in that particular district, and shows so conclusively that if the *average interest* obtained is 10 per cent. upon the capital invested, the best farmers must secure a still larger income from their money; and the encouragement to imitate their example is just so much the greater than if we had not the figures before us to prove what the average is, and therefore what is the basis from which improvement must start.

We are also shown that those who think the enumeration of Statistics is of no importance because "estimates" will answer every purpose, are very wide of the truth. Estimates of the crops of Tompkins were made beforehand by judges supposed to be well qualified for the task, and who were probably as well able to undertake it as any others would have been; the results prove that their calculations were very far from correctness—the estimated aggregate of the wheat crop of the county being put down by them at little more than three-fourths the real product—that of rye, at only one-sixth—that of barley, at about five-twelfths—that of hay, at about two-thirds; while oats were over-estimated by fully 70 per cent., and potatoes by 20 per cent., and out of the ten crops in which trial was made, Indian corn was the *only one* in which there was any approach to accuracy.

The following figures present the returns of the crops in Tompkins County in 1860, and the average per acre:

	Acres sown.	Crop in bushels.	Bush. pr acre.
Spring Wheat	9,449	134.069	14.2
Winter Wheat	7,336	111,455	15.0
Rye	3,900	55.604	14.2
Oats,	27.651	1,030,016	37.2
Barley,	4,605	116,491	25.3
Corn,	14.035	530,282	37.7
Buckwheat,	8,520	148.248	17.4
Peas,	389	7,401	19.0
Beans,	83	1,770	21.0
Potatoes,	2,040	156.486	76.0
Turnips,	98	15.590	395.0
Beets,		3,137	
Carrots,		20,030	

There were 42,288 acres of Meadow, which averaged very nearly one and a half tons, producing 62,162 tons of Hay, *beside* 6,476 bushels of Grass-seed.

There were 14,810 Cows milked in the County, producing 1,849,145 pounds of Butter, and 100,082 pounds of

Cheese—equivalent to 128 pounds of Butter per cow per year. The Census of 1845 shows an average of 102 pounds of Butter per cow; in 1850 it was 109 pounds; in 1855, 113 pounds; in 1860 (returns for '59) 117 pounds. The increase of 11 pounds per cow between 1859 and 1860, is supposed to arise from the drouth and grasshoppers which prevailed in the former of these two years, while in 1860 pasturage was good; but the figures prove a gratifying increase steadily going on since the first enumeration in 1845.

There were 16,981 Hogs raised in the County in 1860, 6,157 sold alive, and 10,476 fattened and killed, which averaged 229 pounds per carcass, making an aggregate of 2,438,789 pounds of pork.

There were 806 Colts raised, 8,667 Horses on hand, and 1,132 sold at an average price of about $96, their aggregate sales amounting to $108,200.

There were 1,751 Oxen in the County, 15,346 Cows, 9,964 other Cattle besides calves, 5,637 Calves raised during the year, 3,080 Cattle sold for beef, and 1,765 slaughtered on the farm. There were 27,853 head to be carried through the winter.

There were 43,191 Sheep in the spring of 1860, 19,339 Lambs raised, 17,764 sheep and lambs sold, and 40,756 fleeces sheared, which averaged 3.14 pounds per fleece—an aggregate production of wool of 157,691 pounds.

There were 148 new dwellings erected in the County during the year, exclusive of those in villages, at an expense of $75,522, and 233 new barns, costing $53,793.

There were laid during the year 3,438 rods of Tile Drain, 36,341 of Stone Drain, 1,318 of Board Drain, 7,364 of open ditch, 5,918 of full stone wall and 7,031 of half wall. The above is equivalent to a total of 150 miles of drainage.

The County contains 204,935 acres of improved land, and 63,390 acres unimproved land, making a total of 268,325 acres.

The estimated cash value of farms in the County is $11,945,329; value farming implements and machinery $379,968; value live stock, $1,526,395, making a total of $13,851,692.

To the above figures it should be added that the season of 1860, in the language of the report, "as a whole may be regarded as a prosperous one, though our excess of rain in haying and harvest season interfered materially with the securing of crops in the best condition. Much hay was housed in bad order; some corn was injured by cribbing in a wet state or mould in the shock, and one-fourth of the crop of buckwheat was lost before it could be got dry enough to thrash." As to winter wheat, the damage from the midge did not probably exceed 5 per cent., and the crop of spring wheat was perhaps lessened 10 per cent. from the same cause. "Oats," says Mr. Cornell, "are esteemed by our farmers as a crop involving less risk from accident of season, or injury from the ravages of insects, than any other; and though it is regarded by most farmers as an exhausting crop to the soil, and an unfavorable crop to seed with, it is nevertheless a popular crop, and more acres are sown with oats than any other grain in our county." The season was as favorable as the average for Corn, which Mr. C. considers the "surest and most profitable grain crop" for the farmers of Tompkins; "the crop was very well grown, and generally placed in the shock before the killing frosts of the latter part of September. Much difficulty, however, was experienced in getting the corn dry enough to crib in good order, owing to the excess of wet weather in November, and a portion of the crop was injured through that cause." Like peas and beans, Potatoes and other roots are cultivated "in small parcels, scarcely an acre upon any one farm." The potatoes "are mainly planted to supply the farmer's family and the market demand of our village population, very few if any, being sent out of the county for a market, and much less than formerly are they used by the farmer for early feeding to his porkers. The crop of 1860 suffered more by rot than those of the year or two previous; our reports show that fully one-fourth of the crop was thus lost." Hungarian Grass and Millet are not popular. "Tobacco," Mr. C. remarks, with much energy, "has defiled 82 acres of the soil of our county, and 124,332 pounds of the filthy stuff is thus added to the quantity that annually contaminates the atmosphere we are compelled to breathe."

As to Fruit there were planted in Tompkins county during, 1860, 17,892 apple, 6,763 pear, 3,485 peach, and 4,705 cherry trees, and 3,594 grapevines. The aggregate crop of the county foots up as follows, omitting the large amount consumed by the families of the producers, which was not taken into the account in the report:

APPLES. 349,213 bushels, and 7,705 barrels cider.
PEACHES, 11,271 bushels, sold for $9,014.
PEARS, 2,664 bushels, sold for $2,087.
DRIED FRUITS, Apples, 13,282 bush.; Peaches, 848 bushels.
GRAPES—$3,922.

"The Grapes represented as sold for the above sum do not embrace the entire crop, as several of our citizens pressed the juice from their grapes and made wine to the extent of 7,000 gallons. Wine has been made from other fruits to a considerable extent, but we have no reliable statement of the amount. There are preparations making in the vicinity of Ithaca for extending the grape culture for the purpose of manufacturing wine, and if the enterprise is not checked by some unforeseen cause, wine will become an important feature in our future reports."

Among other remarks that may be made in conclusion, is the influence of Temperature upon the growth of Indian Corn. The greater the altitude of the town above the level of Cayuga Lake, and hence the lower degree of temperature, the less average bushels of corn per acre are produced—Ithaca, the town bordering the lake, showing an average of 46.7 bushels per acre, while Groton, with an average altitude of 1,000 feet above the lake, only produces 32.4 bushels—a difference of 14½ bushels per acre. The same fact is illustrated in the returns from other towns. The steady increase in the products of the Dairies, above alluded to, is thought to prove the adaptation of a Short-Horn cross for dairy purposes. The number of Sheep kept is about 50,000 less than ten years ago, and while fine-wooled sheep are thus diminishing in numbers, farmers "have discovered their interest in the coarser wooled varieties that supply early lambs and good carcases for market."

Mr. CORNELL undertook the collection of these statistics on the part of the Farmers' Club of which he is President, and both he and they are to be congratulated upon the success of the enterprise. He proposes to continue the same undertaking hereafter, until the Legislature makes provision, as it should have done years ago, for the annual procurement of such returns. Would that other Farmers' Clubs might imitate so excellent an example!

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☞ We are indebted for copies of the excellent address delivered before the Agricultural Society of Adams, Rodman and Loraine, by Hon. EDWARD EVERETT, and noticed in the Co. GENT. at the time of its delivery—to the author, and to Gen. S. D. HUNGERFORD of Adams. We have marked several extracts for early publication.

SPREADING MANURE IN AUTUMN.

In the last No. of The Cultivator, you startle New England farmers by the advice of Mr. Thomas to Cayuga Co. farmers, to spread their manure for spring planting in the fall. It is the general supposition with us, and practiced upon, that by so doing the best part of the manure will be washed away, but if put on just before planting, and then plowed and harrowed in, all the good of the manure will be retained. All the "theorists," from Dr. Silas Dane in his "Georgical Lexicon," (1790) to the most modern writers on agriculture, and their name is Legion, whose works I have read, assume that manures spread in the fall will be leached of their most valuable salts before the season for plowing in, and I do not know a farmer of my acquaintance in Massachusetts or Connecticut, who would not think it wasteful farming to spread manure in the fall on land to be plowed in the spring.

Perhaps I am all wrong and Mr. T. is right. I want to know the proper mode and hope Mr. T. will give us his reasons for the faith that is in him? R. Goodman.

There appear to be but two reasons why autumn manuring is better than spring, namely, 1st, it accords with experience, and 2dly, it agrees with theory. Perhaps the first reason will be sufficient—if so, we can only recommend our correspondent and his neighbors to give it a full and fair trial. The instances where it has proved best, most distinctly and strikingly so, are quite numerous. The theory is exceedingly simple. Manure is most efficacious when it is intimately diffused through the soil. If spread in lumps, left in lumps, and plowed in and allowed to remain in lumps, it cannot be worth half as much as when finely pulverized and well mixed. There is no doubt that the difference against spring application would be greatly lessened if the manure could be first finely broken; then very evenly spread; next, well mixed with the top soil by frequent harrowings; and lastly plowed in to a moderate depth. But an easier way to effect all this fine intermixture, is to spread in autumn. The soluble parts, including a large portion of all that is valuable, are dissolved by autumn and winter rains, and spring rains carry them into the top soil, diffusing them among the particles more minutely and more perfectly than by the finest pulverization. Very little is carried off, unless the manure has been thrown into the bottom of swales or into streams. Perhaps six to twelve inches of water falls by all these rains; yet very little runs off, without first soaking into, or passing into contact with the soil, which absorbs and retains all the rich parts. One of the best farmers in the country, who has given special attention to the subject, thinks that the manure which water holds in solution, will be all absorbed or strained out of it by flowing a very few rods over a surface of grass; and experiments have also shown that liquid manure filtering a foot or two through loam, runs off clear. There is no doubt, therefore, that so thin a stratum of water as usually falls in a shower of rain, would soon have all the rich parts it might get from surface manure quickly strained out and held fast by the soil over which it slowly finds its way.

Sorghum Molasses.—At the Illinois State Fair, a discussion was held on the manufacture of Sorghum molasses. Prof. Turner considered its manufacture profitable, when common corn would not bring over thirty cents per bushel—above that price, raising corn was the most profitable. C. D. Bent, of Iowa, made 250 gallons from an acre; another cultivator made 94 gallons from the third of an acre. The poorer and drier soils bring the best juice. Skimming while boiling, is the only clarifying now adopted. There appears to be no difficulty in manufacturing sugar from the cane.

SCRAPS FROM THE HORTICULTURIST.

The last number of the Horticulturist contains some interesting facts, which we glean for our readers, and add some suggestions of our own:—

Grapes.—The editor has received from Reading, Mass. specimens of the *Dracut Amber*, "said to ripen ten days before the Concord." It is described as having a large berry and small bunch; of a dark amber color, and "with a strong *native* aroma"—by which we are to understand that it has an intolerable foxy scent. The editor says, "it is too inferior for a table grape." He has also received, from other sources, various "native" seedlings, which he has "seriously thought of sending to Gen. Scott for army purposes, as the smell of them would scatter the rebels faster than the smell of gunpowder."

Making Outlines of Fruit.—A correspondent gives his mode, which is simply cutting the fruit through the middle, stem and all, and then placing the flat, newly cut surface on paper, and running the point of a lead pencil around the whole. The juice of the fruit will wet the sheet, and must be immediately absorbed by blotting-paper; then pass a fine point again over the outline, and secure it on a sheet of transfer paper. This mode may do very well; but we have long practiced an easier, more accurate, and more expeditious way. Cut the fruit, as before, through the middle, a little before it is fully ripe, and it will dry slightly in a few minutes so as to impart but little juice to the paper—the application of blotting-paper to the cut surface will also assist in removing the juice. Then with a pen and ink, lightly touch the edge, inking the stem rather heavily; press it well upon a sheet of soft, smooth, unsized paper, and a perfectly accurate impression will be made. The stem must be separately and hardly pressed. By using reddish brown ink for red and russet fruits, and greenish brown for green fruits, the effect will be fine. Any defects in the impression are easily corrected with a pencil or pen. A little practice will enable the operator to apply just such a quantity of ink as will give with a single impression a clear outside line, and a soft shade within.

Strawberries.—An article from A. S. Fuller of Brooklyn, contains among other statements, the following in relation to some of the newer sorts, founded on his experience:—

Wilson's Albany, the most productive—its very acid flavor becomes mild, if allowed to remain two or three days after it colors. *Triomphe de Gand*—the only foreign sort that gives general satisfaction. *Bartlett*,—hardy, good for field culture—bears crowding—fruit large, fine crimson, flavor moderate. *Hericart*—excellent, hardy, but poor bearer. *Trollope's Victoria*, large, handsome, tender, not productive. *Downer's Prolific*, "wonderfully productive," but wanting in quality. *Chorlton's;* seedling of Iowa, more prolific and larger, but no better in flavor. *Walker*, very rich, but neither large nor productive. *Hooker*, for flavor, at the head of the list, but quite tender and unproductive. *Wizard*, large, soft, acid, deficient in flavor. All these are staminates.

A Model Apple Tree.—W. Bacon of Richmond, Mass., furnishes a description of "the best specimen of an apple tree he ever saw." Its head is so near the ground that a person can without difficulty step into the lower branches, and these branches spread so low that the fruit can be gathered without difficulty by a person standing on the ground. They are long branches, and the top of the tree forms a symmetrical hemisphere. Neither the axe or the saw has been used in forming the head—the hand and the pruning-knife directed the first starting of the branches.

THE CULTIVATOR.

ALBANY, N. Y., DECEMBER, 1861.

TO THE AGENTS OF THE CULTIVATOR.

In presenting to the Public the Prospectuses of their Rural Publications for 1862, the Proprietors of The Country Gentleman and The Cultivator, desire to express the conviction that at no time during the whole history of our Country, have the existence and extension of

An Improved and Prosperous Agriculture,

Been of such momentous importance to the National welfare, as at the present Crisis of events. Thirty years ago the Senior Editor of these Journals was led to undertake the publication of a Farmer's Paper, from the confident belief that the Amelioration of American Husbandry could only be brought about through the Co-operation of Farmers themselves—in other words, that an Agricultural Periodical made up of their *Practical Experience*, contributed in great part by their own pens, would afford the surest medium for the Diffusion of Information, the widest field in which Error, Prejudice and Deterioration could be encountered, the most trustworthy Guidance and Aid in reaching

More Thorough and More Profitable Systems of Farming.

Of the correctness of this belief, every year that has since elapsed, has supplied the most convincing evidence; and now that we are engaged in a War, which must eventually add to the consumption, and, to a certain degree, diminish the productiveness of the Country, while at the same time other Nations are eager purchasers of whatever grain and flour we can spare them, those who cultivate the Soil should welcome the more liberally and earnestly every means by which light can be thrown upon the manifold Operations and Interests of the Farm. EVERY READER is, therefore, solicited to

Exert his Influence.

In promoting the Circulation of this Journal, if not by active efforts to procure subscribers for it, at least by extending the knowledge of its character and design among his neighbors and friends.

☞ A sample copy of the Annual Register for 1862 will be sent out with this Number of the Cultivator *to those from whom we have hitherto received Clubs, for use in canvassing for Subscribers the present Season.* Should any agent through miscarriage in the mail, or otherwise, fail to receive the Annual Register, we should be glad to be informed of the fact at once. We hope that no one who has in previous years, acted for us, will suffer his Club to go by default the present season.

Extra Copies to New Subscribers.

We have printed a large extra edition of the November and December numbers, and will supply them as long this edition holds out, to all subscribers *marked as* new *upon the Club lists.* Old subscribers will have received them already, but when any present subscriber wishes for a duplicate to circulate among his friends, or for other purposes, it will be forwarded with pleasure.

We desire also to ask for our Weekly Journal the attention of those for whom the Monthly visits of The Cultivator do not come with sufficient frequency:—

The Publishers claim that

The American "Country Gentleman"

Is the Tiller of the Soil who places before himself the highest standard, as regards the culture and fertility of his Fields, the necessities and comforts of his Buildings, the neatness and taste of the Homestead and its surroundings; who aims to accomplish everything he undertakes to the best of his capacity, and neglects no source of Improvement either for himself or in the management of his affairs: and this Title was consequently given to their Weekly Journal, with the determination to make it

The Organ of Our Best Farmers in Every Part of the Union.

They believe that a general demand now exists for a Periodical issued as frequently as once a week, the main objects of which are of a purely Practical kind; the Crops and Processes of general Husbandry, the Management and Breeds of Domestic Animals, the care of the Orchard and Garden, the Household Economy of the Farmer, and the general Progress of Agricultural Events—subordinate to which, and incidental to the chief purposes always held in view,—are also included appropriate miscellaneous reading, and a concise Record of Current Events.

Terms to Clubs.

The Country Gentleman and Annual Register are furnished as follows:—Single copies of each $2.25; two copies, $4; four copies, $7; eight copies, $13, and any larger number at the same rate, which includes the Postage on the Register. Where, however, the subscribers are already supplied with the Register, or do not wish it, we will send the Country Gentleman alone as follows:—Three copies for $5; five copies, $8; ten copies, $15. New volumes begin with July and January, each year, the 19th commencing with January 1, 1862.

☞ Subscribers in the British Provinces will each add twenty-six cents a year to the above terms, to cover United States Postage to the Canada lines.

The Country Gentleman in a Cultivator Club.—In making up Clubs, a subscription to the Country Gentleman at $2 a year, will count the same as Four subscribers to The Cultivator, and the subscriber to the Country Gentleman will receive one copy of the Register. That is, Five Dollars will pay for one copy of the Country Gentleman and six copies of The Cultivator, each subscriber receiving a copy of the Register.

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☞ Agents who wish the Register to supply to every subscriber as fast as they take his name, can remit for them at the rate of Fifteen Dollars a hundred, (15 cents apiece,) and on completion of their lists, send the remaining 35 cents for each subscriber. This has proved an excellent plan; each subscriber, as soon as he pays his Fifty Cents, receives one-half his money back in a Twenty-five cent book, and the Agent has no farther trouble in the collection of the money.

The Register Postage Free.—We shall prepay the postage on all copies of the Annual Register without charge to the subscriber.

Members of Clubs may receive their papers at different Post Offices.

Address, LUTHER TUCKER & SON,
Albany, N. Y.

☞ It is with deep regret that we have to announce the Death, on the 16th inst., at his residence in Kinderhook, of Dr. JOHN P. BEEKMAN—always an active friend and advocate of agricultural improvement. Dr. B. was educated as a physician, and followed his profession at Kinderhook for a number of years, during which he was too close an observer not to regard with apprehension the constant deterioration of the soil in his neighborhood, arising from the bad system then pursued by most of the farmers, not only of his own vicinity, but to a great extent throughout the country. Seeing the necessity of a change in this respect, his earnest desire to assist in bringing it about, brought him into association with others who were also striving to draw public attention to the importance of diffusing information upon the subject of agricultural improvement among the farmers of the State. He not only labored with his pen, but he carried his zeal and strong common sense into the business of practical farming; and undoubtedly did more, both by precept and example, than any other one individual, to produce a revolution in the practice of agriculture, by which the farming of Columbia county was changed from an exhaustive and unprofitable, to a most productive and profitable system—a system by which the farmers, instead of annually becoming poorer, have been growing richer and richer for years past.

His efforts in the good cause were by no means confined, however, to his own County. He was one of the earliest movers in the establishment of a State Agricultural Society, and was associated with Judge BUEL in conducting THE CULTIVATOR when it was published as the organ of the Society. In 1837 and 1838 he filled the Presidency of that body, under its old Constitution; and, after its re-organization in 1841, he was again chosen to occupy this honorable and responsible position, in 1844, the year of the Poughkeepsie Fair. At the time of his death, Dr. B. had reached his 74th year, and, until comparatively a recent period, had been a constant attendant upon the Meetings and Exhibitions of the Society, ever ready to co-operate in extending its influence and increasing its means of usefulness. He had also filled several public offices of distinction, among others the Senatorship of the State; and "while his abilities," says the Argus, "have adorned the wider sphere of his public life, his virtues have endeared him in no ordinary degree to the private circle in which he moved, and his death will be sincerely mourned by the family and friends who loved and honored him in life."

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A GOOD COW.—We exhibited a milch cow of native breed, at our State Fair, which gave 70 lbs. of milk per day for the first ten days in June, and 57 lbs. per day for the last ten days in August—the average amount of butter from the above milk, was 2½ lbs. per day. The statement is a large one for many people to believe. I would like to see published in your valuable journal, a statement of the record of the production of the best cows you have in your possession. H. G. ROOT. *Bennington, Vt.* [We have not time at present to collate and make up the record our correspondent desires, but may do it hereafter.]

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☞ We have received the "Transactions of the Board of Agriculture of Upper Canada," in three volumes, for 1856, '57, '58 and '59, which we have examined with much interest. The extent of the very liberal support which Government there affords to Agricultural Societies, may not be generally known on this side the border. We find the following appropriations, as shown by the Reports of the Treasurer, R. L. DENISON, Esq.:—

1855, to County Societies, net amount,		$30,262.50
do. Provincial Society,	$3,362.50	
do.	4,000.00	
		7,362.50
Total grant to Ag. Societies, 1855,		$37,625.00

The amount appropriated by Government in 1856 was about the same, and in 1857 it was made $2,000 larger, by a grant of this amount to aid in the printing of the Society's Transactions. In 1858, the appropriation to County Societies was $48,483, of which the Provincial Society receives 10 per cent., or $4,848.30 beside its own grant of $4,000, being a total in that year

To Provincial Society,	$8,848.30
Net amount to County Societies,	43,634.70
Total grant to Ag. Societies, 1858,	$52,483.00

In 1859, we find the following items:—

Government Grant, (purpose not specified,)	$13,321.21
Annual Appropriation,	4,000.00
Ten per cent. on County Society Grant,	4,868.30
Total Government aid to Provincial Society,	$22,189.51
Net Grant to County Societies	43,814.70
	$66,004.21

It may not be a very good time to urge upon the attention of our authorities, the striking contrast between the sums appropriated for the advancement of Agriculture in the Province of Canada West and in the State of New-York, respectively, and yet we cannot forbear giving our neighbors the credit they deserve for having discerned that the great interest of their country is its Farming, and for having acted so liberally and judiciously upon that knowledge. Our main interest in New-York is also our Agriculture, and behold the munificence with which we aim to cherish and advance that interest:—

The State Agricultural Society receives annually,	$800.00
The County Societies the balance of, $8,000.	7,200.00
The Entomologist of the State Society	1,000.00
	$9,000.00

and, in addition, the State prints our Transactions! We cannot find recent statistics for the purpose of placing side by side the population and extent of Canada West, compared with this State, but to go back as far as 1851, it is our impression that she had about two-thirds the surface of land under cultivation that we had, and not much more than one-third our population. She probably gives annually *three to four times as much money* for the benefit of her agriculture as we do, Transactions and all included.

It may be added that there were, in 1859, *sixty-one* County or Local Societies in Canada West, deriving benefit from the appropriations above mentioned—receiving from two or three hundred up to nearly seven hundred dollars each, per year.

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☞ Our Foreign exchanges bring us the official statement of the imports of Breadstuffs into Great Britain for the first eight months of the present year, or up to Sept. 1st, showing that their total value must have been little short of *one-hundred millions of dollars*, against imports of about $35,000,000 in the corresponding period of 1860, and $40,000,000 in 1859. The figures with regard to wheat and flour, are:—

	Eight months ending August 31		
	1859.	1860.	1861.
Wheat, bushels,	23,081,960	20,229,120	39,265,664
Flour, cwt.,	2,741,257	2,463,092	5,030,281

The London Times gives the following interesting statement as to the proportions in which Great Britain has been a purchaser of breadstuffs in different countries:—

WHEAT—Percentage from,	1859.	1860.	1861.
Russia,	15½	19	12½
Prusia,	16	31	14
Denmark,	5	8	3½
Mecklenberg,	3½	5	2
Hanse Towns,	1½	3½	3½
France,	37½	5	3½
Turkey, Moldavia and Wallachia,	2	5	4
Egypt,	12	3	5½
United States,	—	15½	36½
Other countries,	7	5	15
Total,	100	100	100

FLOUR—Percentage from	1859.	1860.	1861.
Hanse Towns,	5	7½	4
France,	91	41½	9
United States,	1	36	61
Other countries,	3	15	26
Total,	100	100	100

"As regards Wheat it thus appears that the greatest fluctations occur in the imports respectively from France and the United States. In 1859 the position of the two countries as contributors to our wants was exactly opposite to that which they now occupy. In 1859 France supplied more than a third of our whole requirements, while the amount from America was merely nominal. America has now supplied 36½ per cent. and France only 3½ per cent." In Flour, moreover, "the command of the trade has fluctuated chiefly between France and America, France having supplied in 1859 91 per cent, of our whole importations, and America only 1 per cent., while *this year America has sent us* 61 *per cent., and France only* 9 *per cent.*"

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☞ The Commissioners recently appointed on the part of the United States to correspond with the Commissioners of the English Government, with regard to the Great International Exhibition, to be held at London, in 1862, met in Washington on Monday of last week. Telegraphic despatches inform us that Hon. WM. H. SEWARD was chosen Chairman, and Mr. Kennedy Secretary. A Committee of five, Mr. B. P. Johnson of New York Chairman, was appointed to wait on the President to solicit the use of a Government vessel to transport the contributions of Americans to the Fair. An Executive Committee was appointed at a subsequent meeting, "consisting of B. P. Johnson, of N. Y., Chairman; J. C. G. Kennedy, W. W. Seaton of Washington; and James R. Partridge, of Md., the last named Secretary. It is their duty to make all necessary preparations for the exhibition. An office is to be established at Washington, and a description of all articles intended for exhibition, submitted to the Committee for their action. Inventors or other exhibitors can apply to any one of the Commissioners or Executive Committee."

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☞ The Third Catalogue of the "Maryland Agricultural College" has been sent us. It shows a list of over one hundred students. As to the design which the Trustees and Faculty of this Institution have placed before themselves, we quote from their circular:—"It is not so much designed to teach the pupils to be farmers, as to make our farmers liberally educated gentlemen, with special reference to the sciences that bear immediately upon their profession; to indoctrinate the youth of Maryland in those arts and sciences, which, with good manners and morals, shall make them not only skillful in their profession, but ornaments to society, useful citizens, and an honor to the State. Thus, while the Student learns the various useful details of Agriculture and Horticulture, instruction in these is not at the expense of, but is merely superadded to moral and intellectual culture. The course of study, which is as extensive as that of any College, includes the Ancient and Modern Languages; the Mathematics and their applications; the Natural Sciences, with special reference to Agriculture, Moral and Intellectual Philosophy and Political Economy." Tuition, board, etc., $250 per annum.

We have also received the Catalogue of the "Michigan State Agricultural College." It shows the following summary of pupils:

Senior Class,	7	Freshman Class,	21
Junior Class,	9	Preparatory Class,	29
Total,	66		

The Tuition here is free to all students from the State, and the board furnished at cost; room rent four dollars a year, and a matriculation fee of five dollars. "Students work on the Farm or in the Garden three hours a day, for which they receive adequate remuneration; the amount paid depending on their ability and fidelity. The wages for labor are applied on their board in the quarterly settlement of accounts." The object of the Institution is simply defined as being "to afford thorough instruction in Agriculture and the Natural Sciences connected therewith."

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☞ At the Annual Meeting of the Orleans County Ag. Society, lately held at Albion, the following officers were elected: President—A. B. BAILEY; Vice-President—Paul Pratt; Secretary—L. C. Paine; Treasurer—David Bettis.

MANURING FOR CORN IN AUTUMN.—We noticed some time ago the excellent practice of J. BEATTY & SONS, of Cayuga county, in applying the manure for their corn the previous autumn, to grass land, the sod to be inverted just before plowing. One of the best corn fields we have anywhere seen this year, is a field thus treated. It has since been husked and measured; the product is rather over *seventy-five bushels* of shelled corn per acre. Another portion of the same field was treated alike in every respect, with the exception of applying the manure in spring. The crop is much inferior to the other part.

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MOWING MACHINES WITH OXEN.—An "Old Subscriber" in Middlesex Co., Mass., states that it is becoming common for farmers, who have a yoke of oxen and but one horse, to work their mowing machines with oxen. He says that the Buckeye mower has done well for this purpose. He inquires if the Wood machine would probably do as well. We are inclined to think it would; although possibly the Buckeye might run steadier without a rider, as might be necessary in driving oxen. Both machines are well adapted to passing obstructions, on which account our correspondent inquires; but of all the good new machines for this purpose, we have seen none to exceed the "Cayuga Chief," made at Auburn, N. Y., and which we have had an opportunity of testing in this respect. The best proof in such cases is experience, and those machines which actual trial show best adapted to the use of oxen must be chosen. The most reliable information therefore may be had of farmers who have used oxen for a length of time.

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LEAVES FOR LITTER.—There are many parts of the country where grain is not extensively raised, and where straw for litter is scarce, but in which an abundant supply of forest leaves may be easily obtained, just before winter. They are often blown in great piles on the lee side of hills or fences, or into hollows, and a wagon may be loaded with them in a few minutes. If kept dry they make the warmest of all kinds of bedding, because the wind does not draw through them; and the manure is also excellent. The straw may be then cut up with hay, or mixed with meal for feed.

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☞ We learn that Col. JOSEPH JULIAND 2d, of Bainbridge, Chenango Co., whose improved stock has been more than once alluded to in our columns heretofore, has just sold the roan Short-Horn bull calf "*Daisy's Grand Duke*," got by "*Romelia's Grand Duke*," he by Thorne's "*2d Grand Duke*," &c., to NELSON IRELAND, Esq., of West Bainbridge.

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HEREFORD SALE.—The herd of Mr. John Hewer, of Vern Farm, Marden, of high standing among breeders of Herefords, was sold at auction on the 24th ult. Thirty-two cows and heifers fetched about 1000 guineas, averaging nearly 35*l*. Among them Nell Gwynne, a 3-year old heifer, fetched 71 guineas, and the calves of other two—Dinah and Gipsy Lass—viz., a heifer calf of the former, and bull calf of the latter, fetched 61 and 90 guineas respectively. Fifteen bulls and bull calves were sold for 810 guineas, or 52 guineas each, Abd-el Kader, a 3-year old bull, realizing 136 guineas.

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☞ Dr. WENDELL of Hazlewood Farm, near this city, has left us a fine sample of the Sweet French Turnip, the seed of which was sown the last of July, after a crop of garden peas had been taken off the ground. It has an unusual weight of top, as well as a good sized root, and if it realizes what has been claimed for it, for late-keeping in the spring, is a variety worthy of more attention. Dr. W. has also tried the varieties of the Potato originated and introduced by Mr. GOODRICH of Utica, and reports very favorable upon the "Oneida Pink-Eye," particularly as regards productiveness, while for quality he thinks it fully equal to the Peach Blow. It is not at its best for for the table until the late winter or spring.

☞ The Annual Register of Rural Affairs for 1862, which has been for some weeks advertised in our columns, will be ready to send out early next week. The general character of its contents and the extent to which it is illustrated, will appear from the Advertisement alluded to; and we may add that in both respects, it is at least equal in value and interest to any number that has preceded it.

The low price at which it is sent by mail *per dozen*, is such as to remunerate any one quite liberally for the sale of this quantity, and we know of no way in which so much useful reading, accompanied by so many engravings, can be had by the farmer for *Twenty-five Cents*, as by the purchase of a single copy.

Any or all of the seven previous numbers of the Annual Register may at any time be procured. Those enclosing a remittance will be particular *to mention the year required*, as mistakes frequently occur from orders naming the wrong year—it is the number for **1862**, it will be

Price of the Annual Register for 1862.

Single Copy, post paid, ...	25 cents.
Five Copies, do.	$1.00
One Dozen, do.	2.00
One Hundred, per Express, ...	15.00
Complete Sets, Eight Nos., post paid, ...	1.60
Two Complete Sets, do.	3.00
Three do. do.	4.00

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☞ The Report for 1860, of the Commissioner of Statistics of the State of Minnesota, lately issued, shows the average yield of wheat per acre in that State last year, to have been 22.05 bushels; of rye, 21.56; barley, 33.23; oats, 42.39; buckwheat, 15.73; Indian corn, 35.67, and potatoes, 138 bushels. Syrup was manufactured from the sorghum or "Chinese sugar-cane," to the extent of 9,859 gallons.

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[For the Country Gentleman and Cultivator.]

"OUR COW."

We bought her nine years ago last June, for twenty-five dollars, nobody pretending that she was any "great scratch," she being poor and always having been poor, and not given a great amount of milk. Her first season with us she didn't exceed our expectations, though she gave us all the *milk* we wanted for family use, buying our butter of course. She however gained flesh somewhat, and by another spring she looked quite decently, and in due season dropped a calf, and gave a good mess of good milk. She was then seven years old, and continued to improve for five years, then for two years about alike, and the last year has diminished in quantity of milk about an eighth part. She "came in" last in April, and now (Oct. 29) gives twelve quarts per day, without any messing. For the last eight years she has supplied our family of 8 members old and young, with all the milk, cream and butter we wanted, except a part of one year, which by accident she went farrow, and we bought butter. We have sold butter and milk enough to pay for what we have had to buy during her annual recess from giving milk, of four weeks. We have not known just how much butter she would make in a week, as we have to use a large part of her milk and cream each day; but by weighing her milk one week we found it averaged a little less than forty-four pounds daily. She has laid in the pasture day and night through the summer; in the winter is stabled and has a small lock of hay at 6 in the morning; at 8 a bushel of cut corn-stalks mixed with a peck of cleaned and cut carrots in hot water; at 12 a small lock of hay; at 6 P. M. another bushel of cut stalks, mixed with two quarts of meal. She is milked near 6 o'clock, morning and night, through the year. She claims no "*blood*"—never has been sick a day, nor broken out of her enclosure, nor put her foot in the pail, and apparently eats as well as ever, and is now with calf.

RANDOLPH.

DOES NATURE MAKE SUCH MISTAKES?

Sowing Oats and Reaping Barley.—Two or three years ago I grew barley from oats, and have a friend in Hunts who has several times done the same thing, and with great success. The plan of procedure is as follows. The oats are sown in February, and are cut down during the ensuing summer to within two or three inches of the ground; the next year they come up barley. If any of your correspondents can offer an explanation of the above curious fact, they will much oblige—e. j., jun. [We must beg to express our dissent from this statement. The explanation is that the oats being annual, die on being cut. The seed of barley had remained in the ground without vegetating until the second or third year after being sown. This supposed phenomenon was recorded, discussed and fully explained in Loudon's "Magazine of Natural History" many years back.—Ed.]

We cut the above from the London *Field.* It calls to mind a story told us some years since by a sea captain who had retired from the service and turned farmer. He had amassed a handsome fortune, which enabled him to purchase and stock a farm in Massachusetts to his entire satisfaction. Being at Syracuse one autumn, his attention was called by a friend to a very fine sample of barley, with which he was so well pleased that he determined to try its cultivation, and accordingly ordered a quantity for seed. It was duly received and stored in his barn through the winter. In the spring he had the ground for the barley prepared in the best manner, and the seed sown. It grew finely; but to his great astonishment, on ripening, there was not a head of barley to be found in the whole field—the entire crop had *changed to oats;* of which he had a beautiful crop. "Here was proof-positive of transmutation, about which there could be no mistake." But we had little difficulty, after a few questions about the laborers he employed, and the management of his farm, in solving the difficulty. *His Irishman had undoubtedly fed out the seed-barley, and sown instead of it the oats which he ought to have given to the horses!*

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[For the Country Gentleman and Cultivator.]

Preparing Bone Dust---Good Crop of Corn.

Editors Country Gentleman—Inclosed you will find a sample of bone softened with ley. If you will try it with a knife or finger nail you will find that it crumbles readily and could be easily crushed to a tolerably fine powder. I have used bones six years in succession for corn; five of the six crops were good. My best crop was last year. I applied the bones to that crop in the following manner: the ground (two and one-half acres) was plowed in August six inches deep. In September six barrels of bones were softened* and crushed tolerably fine; the bones were then mixed with twelve barrels of wood ashes. After two days the ashes and bones and four barrels of night soil were thoroughly mixed with about two cords of pond mud; the heaps heated finely and except a little around the edges did not freeze all winter. In April this was applied to the hill before planting, about a quart to a hill; the corn covered half an inch and hoed twice; the product was seventy-eight bushels of shelled corn per acre. No other manure was applied.

The land was planted to corn as early as 1630, and has been planted to corn about once in ten years ever since, and it is doubtful if twenty-five bushels per acre was ever raised upon it before.

Edward Willis.

Massachusetts, Nov. 4, 1861.

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* Will our correspondent favor us with the exact details of his process of "softening" with ley? From the sample sent, we judge the result to be precisely what is now so often inquired for—a practicable and inexpensive method of preparing bones for use. Eds. Co. Gent

CELLARS.

Farmers will soon fill up their cellars with fruit and vegetables, to remain during a part or the whole of the winter. These apartments should therefore be first put in perfect order before receiving their supplies.

We visited, some time ago, the residence of a friend who had given as much attention to the finishing and arranging of his cellar as to that of any other part of his house. It was more worthy of a visit than the finest drawing rooms with rosewood furniture and Wilton carpets. In the first place, the walls were built in the smoothest and most substantial manner; the floors were covered with the best water-lime cement, now as hard as flagging, and as smooth as planed boards; the cellar was divided into apartments, one for vegetables, another for fruit, another still for provisions, a fourth for the dairy, and a fifth for coal and furnace—for the cellar extended under the whole house, kitchen and all. In the vegetable apartment bins were made in the middle, so as to have a passage around them, and in these bins the vegetables were placed, some with only a cover, and others packed in sand, or in moss. Nearly dry and fine moss was preferred to anything else for packing beets, turnips, parsnips and cabbages. The bins were not made of rough boards, as generally seen, but were planed and painted, and the whole presented the neatest appearance. The fruit shelves were, in a similar manner, made of planed and painted material, with a passage all around them, both for ventilation and to allow the attendant to assort them frequently.

The partitions between the different apartments were brick walls, and each one was easily accessible, both from the outside large door and from the kitchen.

How much better is such a cellar as this, than those too frequently met with, low, damp and unpleasant, with a pile of dirty potatoes in one corner, a bin of half broken boards in another, partly filled with half rotten apples; a few scattered cabbage heads lying on the wet earth; and a general medley occupying the rest of the space.

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TOP-DRESSING GRASS.

The practice of top-dressing grass lands in autumn is becoming properly appreciated by good farmers, the advantage being two-fold; first, the mechanical protection from exposure to winds and cold; and secondly, the enriching effects of the liquid manure carried down by rains among the roots of the grass. There is one kind of grass crop to which this treatment is especially valuable,—namely, newly seeded fields. The protection afforded by a thin coat of manure to the young plants of grass and clover, and the impetus given to their growth by the enriching effects seem greater and to pay better in this instance, than in any other case of top-dressing. Farmers may try the experiment, and having tried it, they will be likely to repeat it. It succeeds remarkably well on heavy and strong soils.

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The McCormick Reaper.—The Commissioner of Patents has decided against McCormick's application for the extension of his reaper patent of 1847, on the following grounds:

First: That the invention is one of great utility and importance to the public.

Second: That the sums already received by McCormick, and the sums he is entitled to recover from infringements, together, amount to an adequate remuneration, and, therefore, the patent should not be extended.

[For the Country Gentleman and Cultivator.]

HOW TO MAKE GOOD CIDER.

Messrs. Luther Tucker & Son—As I have been highly pleased with the information of Mrs. Kendall in the Domestic Department of your journal, I wrote Mr. Levesque to send me a good recipe, how to make good cider. Here it is:

After the apples are crushed, press out the juice, put in a clean cask and leave out the bung. It will work without anything being put in; in four or five days, draw off, and put into another clean cask. Do this 3 or 4 times, allowing as many days between each changing. It does not work well in cloudy weather, and so must be left longer. If it does not fine well, it will not keep sweet. To assist the fineing, dissolve 6 ounces of gelantine for each hogshead and mix; do this previous to the last change of cask.

The quality of cider depends on the sort of apples used. Two parts sour apples and one part sweet, will make good cider.

Now observe, let there be no time lost in the whole process, but allow sufficient time to do it well. It is the particles of pulp left in the cider, that causes it to turn sour. To effect the proper clarifying and working, it will require four changes of cask, that is if you want first rate cider. Do not put any water in any part of the process—have all juice.

After the last change, the cider may remain in the cask, bunged up 2 or 3 months. You can then bottle off—lay the bottles down in a cold dark cellar—some will burst, but then you must put up with it. It will be fit to use during the summer, when all parts of the work have been well done The bottled cider will be equal to champagne, and will keep sweet. Some put brandy, rum, gin or other spirits in—it does not preserve it, but only makes it intoxicating.

If you can get Pine Apples *very cheap*, two or three crushed up to each hogshead of juice, will be a great improvement. If you keep the cider in casks, be sure that they are sound and air tight and very clean. Wash out with cold water, then scald out your cask—fumigate with rag or sulphur—melt the sulphur and then dip the rag in; a piece about one foot square will be sufficient for a hogshead—light the rag and then put it in the hogshead—leave out the spile peg only. This will destroy all must or mildew or any other bad taste in the cask.

Thousands of pipes are exported from this island annually.

JAMES LEVESQUE.

Grassdale Lodge, Island of Jersey, England.

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MAKING A PLEASANT HOME.

"Rural Affairs" and the Annual Register.—One of the many things that all can do, is to beautify and adorn their dwellings, and all around them; and to aid them in this department of the many-sided and multiform work of making a pleasant home, they will find some valuable suggestions in the article of Judge F. now under notice. And if they should wish to receive still more assistance in the work of laying out their front-yards, and the grounds surrounding their residences, in good shape and graceful form, I know of no advice that could be given to such, better than that which the Editor of this journal gave to an inquirer for assistance of this kind, in the December number of last year, which was this: "Send to Luther Tucker & Son, Albany, N. Y., for a volume of their *Illustrated Rural Register*, in which you will find just what you want." The same may be said to all who are seeking assistance in laying out their grounds, in seeding and planting their front-yards or lawns, and in beautifying and adorning their premises generally. They will find in the two volumes referred to, (the proper title of which is *Rural Affairs*, and the price of which is $1 per volume, post-paid,) just what they want or need, and more than they will find in any other volume of as little cost. We doubt not that those who have already adopted, or who may yet adopt the advice of our Editor as to sending for the book, will feel inclined, or at least have good occasion, when they see the new forms of beauty which their grounds have assumed or may be made to assume, to thank him in their hearts for that one little piece of information or advice.—*Correspondent New-England Farmer, Boston.*

Inquiries and Answers.

Deodorizing Night-Soil.—I desire to take the night-soil from a vault 15 feet deep and 20 feet square, which is nearly full, for removal to land one mile distant; the handling of it, owing to the disagreeable smell, would be expensive. Is there any cheap way by which it could be deodorized, to enable me to remove it without so much extra expense? I have seen *muriatic acid* recommended—is it practicable and cheap? If so, what proportion should be used? A Subscriber. *Cannelton, Ind.* [The best way of treating night-soil is to destroy the smell before it is taken from the vault, by repeatedly adding some absorbent while it accumulates. Coal ashes is most convenient where coal is used for fuel, simply because it is *very dry*, and in the form of powder. Very dry loam in powder would be as good or better. Powdered charcoal perhaps still better. But as this preparation cannot now be made in the present instance (unless by adding large quantities to the upper surface and then removing successive layers, which would be slow and tedious,) the next best course is to remove it and make it into a compost heap as near at hand as convenient or practicable. Make successive layers of the deposits and of coal ashes, dry loam, dry peat, or powdered charcoal,—the thinner each layer the better,—and after remaining a few weeks, it may be drawn to the field without difficulty or inconvenience. There should be enough of the absorbent to render the heap so dry as to separate readily in spreading, and to retain all the bad odor. If the absorbent is very dry, much less of it will be required—probably if one and a half or two parts, to one part of the night-soil, would be abundant under favorable circumstances. If sawdust could be burned to charcoal, it would doubtless form an excellent material for the purpose. Burnt clay, kept dry, is one of the best preparations. Muriatic acid would be too costly.]

Thinning-Out and Replanting.—I intend to build during the coming season; the site is at present covered with forest—would you advise to clear the land entirely, and then *set out* young trees for shade and ornament, or leave the present growth and trim it? It appears to me, as the trees are so tall, that nothing can be done with them. J. A. H. *Albert Co., New-Brunswick.* [If there are any good small trees, leave these, and cut down the large bare-timber trees. They will thicken in stem and foliage in a few years, and form a useful help to the artificial plantings. The several years required for young newly set trees to furnish shade, induce planters of new places to secure if practicable at least something from the native growth. One of the finest plantations of trees we ever saw was obtained by selling for wood all the trees beyond a certain diameter, (a few inches,) and the small ones thus left had grown and developed themselves for a number of years. If there is no small growth whatever, (which would be a very unusual thing,) perhaps a rapid young growth might be obtained by cutting the stumps closely to the ground, and allowing the young shoots or suckers to spring up, to be judiciously thinned out as required. Whatever course is pursued, it should not be forgotten that young or newly transplanted trees will grow many times faster by keeping the soil mellow and cultivated, while suckers from the stumps of old trees will often outgrow every thing else.]

Manuring Orchards.—I have 80 acres of apple orchard nineteen years old, containing 2,800 trees, of which there are 1,100 Newtown pippin. I wish you would inform me what is the best manure to put on my trees to make them bear, as my Newtowns do not bear. Any information will be thankfully received. Barney Reybold. *Delaware.* [If the trees are unproductive simply because they are unthrifty in growth, the application of yard or stable manure, with a portion of ashes, (or in the absence of ashes, of lime,) will probably be the best thing. The application should be made in autumn, that the soil may be soaked in winter and spring. If only top-dressed, the autumn application is of great importance. If plowed in, it is done most advantageously in spring, after the manure has remained all winter on the surface. It sometimes happens that ashes or lime alone will restore the productiveness. A good deal depends on the character and condition of the soil, which can be determined only by experiment. As a general rule however, common manure, with one-tenth to one-twentieth ashes or lime, will be useful in nearly all cases.]

Enlarged Hoofs.—During the last eight months I have been stall feeding, (soiling) a cow, and so far am well satisfied with the experiment. During that time she has been turned out to run in the yard about three hours each day—but I find now that her hoofs have grown so much that she stands almost upon her heels. Many of your readers, doubtless, have experience in this matter, and I should like to ask if the hoof will bear paring down as freely as that of the horse; and if so, in what manner, and how often should it be done. Country. *Middlesex Co., N. J.*

Timothy Head in Leaf.—Herein you will find a head of timothy which looks as though each seed had sprouted and grown a short distance, but I cannot, on close inspection, find it so. It is something new to me—is it to you? Byron. *Springwater, N. Y.* [This is not an uncommon appearance, and it is commonly and erroneously attributed to the sprouting of the ripe seed by wet weather. It is simply a monstrosity; the *paleæ*, corol, or inner chaff of the head being partially converted to small leaves, in the same way that stamens in the water lily are converted to petals in forming double flowers, as shown in the article on Vegetable Physiology in the Illustrated Annual Register for 1862, p. 158.]

A Blind Cow—Aiken's Harrow.—I have a cow blind—she has been so about a week—eyes are swollen and watery discharges at the nose—disease appears to be in the head. What treatment would you recommend? And would also like to inquire if any of your subscribers have used Aiken's Patent Harrow, if so what was the result? J. B. P. [The disease may possibly be a severe case of opthalmia. If so, and there is some fever, give a dose of glauber's salts from a bottle in the usual way, say three-fourths of a pound dissolved in water. Cold water is perhaps the best local application. If the inflammation is acute, the application of a cloth wet in laudanum and water, (10 or 20 parts of water to one of laudanum,) will alleviate the symptoms. At a later stage, tannin water is a good wash. We are not acquainted with Aiken's Harrow.]

Collar Lumps.—Please tell me in the Cultivator how to remove "collar lumps" from the breasts and neck of horses. They are very sore and troublesome to the animal afflicted with them. E. K. [We have had no experience in such cases, but would suggest as the first thing, to avoid using the horse, or in providing a Dutch collar, so as not to chafe the injured parts; and to wash frequently, and perhaps bandage with cold water, or salt and water.]

Cranberry Cultivation.—I am very anxious to know all about cranberry cultivation. Where can I get the information? J. R. B. [In Eastwood's "Manual for the Cultivation of the Cranberry"—which we can send you by mail, postpaid, for 60 cents.]

Shade Trees.—My house sets back about 300 feet from the main road. The carriage road leading to the house is lined each side with trees, first a deciduous then an evergreen—each side of the gate is a willow, but it is so dry one is dead and the other dying. What trees would you recommend to put in their places? The main road is bordered with maples. Subscriber. [Oaks, if the soil is dry enough, would be the finest, but they grow too slow, probably, for our correspondent's purpose. The black maple is a very fine tree. The most rapidly growing, and a really beautiful, and becoming a magnificent tree, is the *silver poplar* The only objection is its profuse suckering. Perhaps this would be but little detriment in this case—or if so, a few successive and thorough grubbings of the suckers prevent their re appearance.]

Plowing Green Sward.—Which is the best time to plow green sward for corn, in the fall or spring? Young Farmer. *Otsego Co.* [Spring is generally preferred, and as short a time before the planting, as convenient; because if plowed in fall or early in spring, the grass finds its way to the surface and increases the labor of cultivation. Excellent corn is obtained by spreading the manure on the grass or clover in autumn, to leach all winter, and plowing to a moderate depth in spring and planting. If plowed in autumn, the manure should in like manner be spread in autumn, *on the top of the inverted sod*, and Shares' harrow, or a similar implement, to reduce the surface to fine tilth, will be nearly indispensable in the spring. This mode we have also found to bring good crops.]

Cement for Cast Iron.—Will you give me a receipt through your valuable paper, for filling a crack in a large cast-iron kettle. S. B. C. [A mixture of iron filings with sal ammonica, made into a paste with water, will harden so as to be nearly equal to the iron itself.]

Soiling Cattle—Information Wanted. — You would confer a favor upon me, and I presume to other subscribers, if you could refer us to some work on the soiling of stock—some work that would give us practical directions as to the proper crops and their rotation. Or what would be still better, if you could induce Mr. Josiah Quincy to give us the result of his experience and manner of procedure. What are his earliest crops? and also if as much and as good a quality of butter and cheese can be made by soiling, as by pasturing the cows upon the natural grasses of our upland pastures? Also please inform me which in your opinion is the most exhausting to the soil, a crop of Marrowfat beans or of potatoes, say of the Peachblow variety? YOUNG SUBSCRIBER. *Pittstown, Oct.* 14, 1861. [We know of no work on soiling adapted to this country, and founded on extensive experience. Information of this character, would be acceptable to us, and doubtless to many of our readers. Mr. Quincy's experience is given in his Work on Soiling, which may be had at this office, post paid, for 75 cents. For most courses in farming, potatoes are the most exhausting.]

HEDGES.—Which is the most suitable hedge for enclosing a farm-yard, as regards durability of plants, beauty, &c.? Some say the Osage Orange, others Barberry plants, &c. Will some friend inform me through THE CULTIVATOR, the proper kind, where the plants or seed can be procured, price, time and manner of planting, pruning, after treatment, &c.; they would, with yourselves, confer a lasting favor on a friend and subscriber. C. E. BOARDMAN. *Cairo, Greene Co., N. Y.* [If the Norway Spruce should be preferred,—and it would no doubt make a fine hedge and screen combined, in a few years,—it may be had of any prominent nurserymen—and very cheaply at the present time from the nurseries at Rochester. If the Osage Orange should be selected, the plants may be procured of the Illinois nurserymen at a low rate. The Osage should be planted on well drained land to insure hardiness; and to make the hedge even and without gaps, let the buds swell before setting out in spring when only vigorous, starting plants are to be selected. They must be planted where a strip of land five feet wide on each side may be cultivated well and clean for several years, or the hedge will be unsuccessful. Buckthorn is hardier, and more uniform in growth, but it requires very rich soil to grow strong enough. For further particulars, see the article with engravings, in the Illustrated Register for 1860, containing full instructions on pruning, &c.]

BEE BOOK.—Will you be so kind as to inform me through THE CULTIVATOR, as to a good book upon Bees—its price, and where it can be obtained; and also the best Bee-hive, with the plan of its construction—unless it is under a patent, if so, its price. N. O MORSE. *Jewett, N. Y.* [Quinby's Mysteries of Bee-keeping Explained—which we can send you post-paid for $1—is probably the best book for new beginners, and it will afford you all necessary information about bee-hives.]

SULPHITE OF LIME FOR THE PRESERVATION OF CIDER.

Sent by Express anywhere. Price 50 cents.

Nov. 21—w&m1t. WEBB & WALKER, Utica, N. Y.

CRESTED HAMBURGH FOWLS.

A few choice birds of the Golden Spangled Crested Hamburgh variety, may be had by applying to C. N. BEMENT,

Nov. 21—w&m1t. 66 East 29th Street, New-York.

IMPORTED LEICESTER RAM FOR SALE.

The subscriber offers for sale the splendid imported thorough-bred ram "NEPTUNE." He has won first prizes wherever he competed and is probably

THE MOST PERFECT SHEEP

ever brought to this country, He was imported by the subscriber from one of the best flocks in England. Having used him two seasons he cannot put him to his flock again. He has an excellent constitution, and is a first-rate stock getter. He is 4 years old—weight, 260 lbs—clip this year, 16 lbs.—price, $200. ALEX. SOMERVILLE,

Nov. 21—w&m1t. Lower Lachine, Montreal, Canada East.

PURE CHESTER COUNTY PIGS FOR SALE.

Also three or four nice young sows, shipped to order by

Oct. 31—w2tm1t. M. S. KELLOGG, Chicopee, Mass.

ANDRE LEROY'S NURSERIES, At Angers, France,

The proprietor of these Nurseries, the most extensive in the world, has the honor to inform his numerous friends, and the public, that his CATALOGUE OF FRUIT AND ORNAMENTAL TREES, SHRUBS, ROSES, SEEDLINGS, FRUIT STOCKS, &c., for the present season is now ready, and at their disposal. Apply to

BRUGUIERE & THEBAUD,
51 Cedar-Street, New-York.

Oct. 17—w1am3tm3t.

CHOICE POULTRY FOR SALE.

WHITE LEGGED DERBY GAME FOWLS, bred from stock obtained a few years since at Knowsby, England.

STREAKED-BREASTED BLACK-RED GAME FOWLS, bred chiefly from stock obtained of the late Lord Berwick in 1859.

TOULOUSE GEESE, bred from stock imported from France by A. W. Austin, Esq. These are considered in Europe the largest of all geese, and are much esteemed by epicures for the excellence of their flesh.

Price of the Game Fowls, $5 per pair; of the Geese, $12 per pair. All the stock is of the best quality. SANFORD HOWARD,

Nov. 14—w3tm2t. Office of the Boston Cultivator, Boston, Mass.

SHORT-HORNS AND BERKSHIRE SWINE. FOR SALE.

A few COWS and HEIFERS, one aged BULL, and three or four BULL CALVES.

A yearling BOAR HOG, several SOWS and PAIRS OF PIGS two months old.

Prices in keeping with the times, and delivered in New-York, on rail car or ship board, free of charge.

Apply to L. G. MORRIS,
Herdsdale Farms, Scarsdale, P. O., Westchester Co., N. Y.

July 4—w&mtf.

RHUBARB ROOTS.— MYATT'S LINNÆUS RHUBARB.

superior quality. Price per thousand, $30; per hundred, $4.

GEORGE R. UNDERHILL,

Oct. 24—w4tm1t.* Locust Valley, Queens Co., N. Y.

THOS. WOOD continues to ship to any part of the Union, his celebrated PREMIUM CHESTER CO. WHITE HOGS, in pairs not akin, at reasonable terms. Address,

Jan. 10—w&mly. PENNINGTONVILLE, Chester Co., Pa.

MOHAWK RIVER UPLAND FARM FOR SALE.

The farm owned and occupied by the subscriber, situated one and a half miles west of the village of Amsterdam, and containing 138 acres of land, 20 acres being in wood, and the balance under a good state of cultivation. Said farm is beautifully located, and commands a view of the Mohawk River and Valley, Erie Canal, and New-York Central Railroad, that cannot be surpassed. The soil is a gravelly loam, and well adapted to all kinds of grain or grazing: the fences are good, (mostly stone,) and so arranged that stock has free access to water at all times. The orchard and garden contains a large variety of choice grafted fruit, consisting of Apples, Pears, Plums, Cherries, Currants, Gooseberries, Strawberries, Grapes, &c. The buildings are nearly new, the house and principal barn having been built within the last ten years. The house is stone and built expressly for a CONVENIENT, COMFORTABLE FARM HOUSE; the main barn is 64 by 32 feet, with 20 foot posts, and basement 10 feet high; it has other barns and sheds adjoining, sufficient to accommodate a large stock. There is also on the premises a small tenant house, nearly new and in good repair. The above farm will be sold on liberal terms, and possession given the first of April next; or if purchaser desires, can buy stock, farming utensils, &c., and have possession immediately. For further particulars inquire on the premises or by mail, of

JOHN M. VANDEVEER.

June 27—w&mtf. Amsterdam, N. Y.

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We are now manufacturing a superior **Steel Plow**, intended for general use. Some of the advantages it possesses over the cast iron plow, are lightness of draught, durability, and freedom from clogging or sticking in heavy, clayey sticky or tenacious soils. The parts most exposed to wear are so constructed that they may be readily repaired by any blacksmith.

We would refer to the following persons who have them in use: John Johnston, Geneva, N. Y.; Wm. Summer, Pomaria, S. C.; R. C. Ellis, Lyons, N. Y.; Col. A. J. Summer, Long Swamp, Florida; A. J. Bowman, Utica, N. Y.; A. Bradley, Mankato, Minnesota; A. L. Fish, Litchfield, N. Y.; Volney Owen, Union, Ill.; John Slighter, French Creek, N. Y.

"Mohawk Valley Clipper," No. 1, full trimmed, all steel,.. $15.00
do. do. with cast point,.................. 14.00
"Empire," No. 1, with cast point, full trimmed,............ 15.00
For Three-Horse Plows,...................... $1.50 extra.
For Adjustable Beams, ... 1.00 do.

We also manufacture Sayre & Klink's Patent Tubular Shank

STEEL CULTIVATOR TEETH.

These Teeth are intended to supersede the old style of wedge teeth and teeth with cast iron heads. They are not liable to become LOOSE in the frame, like the FORMER, nor to BREAK, like the LATTER. They are as readily attached to the frame as any form of tooth.

SAYRES' PATENT HORSE HOE.

This implement is considered to be superior to any other for cultivating Corn, Cotton, Tobacco, Potatoes, Hops, Broom Corn, Nurseries, and all crops planted in rows or drills.

Steel Shovel Blades and Cultivator Points made, and all kinds of Swaging and Plow work done to order.

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E. REMINGTON & SONS,
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March 21—w&mtf.

THE ILLUSTRATED
ANNUAL REGISTER OF RURAL AFFAIRS
FOR 1862.

THE EIGHTH NUMBER, for 1862, of THE ILLUSTRATED ANNUAL REGISTER OF RURAL AFFAIRS has now been issued from the press. In the attractiveness and value of its contents we do not think it has been surpassed by any preceding number. We submit below a partia abstract of its contents, which will show their variety and the extent to which they are illustrated—the present number of the ANNUAL REGISTER containing more than

ONE HUNDRED AND SIXTY ENGRAVINGS.

The ANNUAL REGISTER for 1862 will be ready early in September, and we are now prepared to receive orders for single numbers or in quantity, which will be filled ss soon as it is issued. The attention of OFFICERS OF AGRICULTURAL SOCIETIES, and others who propose attending Town, County or State Fairs this Fall, is particularly requested to the ready Sale which may be had for the REGISTER during these anniversaries, and on other occasions throughout Autumn and Winter. TERMS—as heretofore: SINGLE COPIES, postpaid, TWENTY-FIVE CENTS; ONE DOZEN COPIES, postpaid, TWO DOLLARS; ONE HUNDRED COPIES, FIFTEEN DOLLARS, and larger quantities at a farther reduction.

PARTIAL ABSTRACT OF CONTENTS.

Among other valuable chapters, the ANNUAL REGISTER for 1862 will contain the following:—

I. FARM BUILDINGS—THIRTY ENGRAVINGS and Four Designs.
1. General Considerations.
2. Estimating the Capacity of Barns.
3. Form of Farm Buildings.
4. How to Plan a Barn.
5. Barn Basements.
6. Cost of Barns.
7. Design One—Barn for Fifty Acres or Less.
8. Design Two—Barn for Seventy-Five to a Hundred Acres.
9. Tool Rooms and Details in Stable Construction.
10. Design Three—A Large Three-Story Barn.
11. Design Four—A Small Three-Story Barn
12. Various Details.

II. VEGETABLE PHYSIOLOGY, or How Plants Grow—SIXTY-ONE ENGRAVINGS.
1. The First Formation of the Embryo.
2. The Seed and the Requirements for its Germination.
3. Process of Germinating in Plants having One and Two Seed Leaves.
4. Mode of Growth and Structure of the Plant or Tree.
5. The Root—Layering; Cuttings; Transplanting
6. The Stem and Branches.
7. The Buds and Leaves.
8. The Process of Growing.
9. Principles of Grafting and Budding.
10. Flowers—their Organs; the Crossing of Different Varieties.
11. Species and Varieties.

III. THE GRASSES—THIRTEEN ENGRAVINGS.
1. Importance of the Grass Crop.
2. Descriptions of the more Common Species.
3. Nutritive Value of Hay.
4. Management of Grass Land.
5. Suggestions in Hay-Making.

⁂ This article includes plain and concise descriptions of no less than TWENTY-TWO of the different grasses, with the peculiarities of which every farmer should be familiar—eleven of them accompanied by carefully drawn illustrations.

IV. LIGHTNING RODS—THIRTEEN ENGRAVINGS.
1. Essential and Non-Essential Points in their Erection.
2. Materials and Connections.
3. Length, Height and Supports—Stiffeners above the Roof.
4. Entering the Earth.
5. The Copper Rod—Various Errors—Cost of Rods.

V. BALLOON FRAMES—TWENTY-FOUR ENGRAVINGS.
1. Their Merits and Practicability.
2. Method of Raising—the Sills, Studs and Wall-Plate
3. Directions for One-Story Buildings.
4. Directions for Two or Three Story Buildings.
5. Siding, Lining and Construction of Partitions.
6. Framing Large Barns.

VI. THE APIARY—THIRTEEN ENGRAVINGS.
1. Advantages of the Movable-Comb Hive.
2. Descriptions of Different Kinds.
3. Management of Bees.

VII. THE ORCHARD AND GROUNDS—FOURTEEN ENGRAVINGS.
1. Summer Pears—Old and New Sorts.
2. The Value of Orchards.
3. Training Weeping Trees.
4. Removing Large Trees.

VIII. THE FARM—HOW FORTUNES ARE SOMETIMES SUNK.

IX. FRUITS AND FRUIT CULTURE—ONE ENGRAVING.
1. Rules for Pruning Grapes.
2. Directions for Transplanting.
3. Root-Grafting the Grape.
4. Depredators and Diseases.
5. Apples for the West.
6. Selection of Hardy Grapes.
7. Young Cherry Trees.
8. High Prices for Pears—The Glout Morceau.
9. Broadcast Cultivation—Apples in Wisconsin.
10. Hardy and Tender Trees—Culture of the Blackberry
11. Culture of Dwarf Apples.
12. Transplanting Strawberries.

X. THE DAIRY.
1. On Cheese-Making by Beginners.
2. Hiram Mills' Way of Making Butter.
3. Two Valuable Rules in Making Cheese.
4. Butter Dairies of Chenango and Delaware Counties

XI. DOMESTIC ANIMALS—TWO ENGRAVINGS.
1. The Best Doctor for Animals.
2. Shropshire Down Sheep.
3. Wintering Sheep.
4. Training Cattle to Jump.
5. Registering Sheep—Care of them in Spring.
6. To Prevent Horses Kicking—Teaching them to Canter
7. Making Cheap Beef—Beginning Winter Right.
8. Regularity in Feeding—Profits of Sheep Raising.
9. Training Draft Animals—Cattle Racks.
10. Swine Fed on Skim Milk—Treatment of Sows with Young Pigs.
11. Relieving Choked Cattle—Weaning Lambs.

XII. RURAL ECONOMY—THREE ENGRAVINGS.
1. Nails, Nuts, Screws and Bolts.
2. Farmer's Tools.
3. The Union Washing Machine.
4. Hay and Grain Racks.
5. Preserving Shingles.
6. Facts for Poor Farmers.
7. Time for Cutting Timber
8. Durability of Posts.
9. To Keep Plows Bright.
10. Sawing and Thrashing by Horses.
11. Provide Domestic Conveniences.
12. The Use of Rawhide.
13. How to Tan Rawhide.
14. Sap Pails.
15. The Cost of Fences.
16. Use of the Clod-Crusher.

XIII. USEFUL TABLES.
1. Value of Food for Domestic Animal.
2 Weight of Grain to the Bushel.
3. To Measure Grain and Corn in the Granary or Crib.
4. Measures of Capacity, Length and Weight.
5. Weights of a Cubic Foot and Bulk of a Ton of Different Substances.
6. Capacity of Soils for Water.
7. Velocity of Water in Tile Drains.
8. Contents of Cisterns.
9. Distances for Planting Trees, &c., and Number to the Acre.
10. Force of Windmills.
11. Quantities of Seed to the Acre.
12. Quality of Different kinds of Wood.
13. Gestation of Animals.
14. Quantity of Garden Seeds Required for a Given Area.

XIV. ADVERTISEMENTS.

This, preceded by the usual Calendar pages and Astronomical Calculations, forms a book which is certainly cheap at its retail price and the Publishers, with a view of rendering its circulation still wider and larger than that of any previous Number, are prepared, as above intimated, to offer the most liberal Terms for its introduction in quantities, either to Agents, Agricultural Societies, Nurserymen, Dealers in Implements and Seeds, or any others who take an interest in the dissemination of useful reading, and in the promotion of Rural Improvement.

Address all orders or inquiries to the publishers,

LUTHER TUCKER & SON,
August 1, 1861. ALBANY, N. Y

POULTRY.—I have for sale, at moderate prices, a large lot of
BRONZE TURKEYS,
CAYUGA BLACK DUCKS,
and a few trios of
GREY DORKINGS,
Oct. 24—w8tm2t. JOHN R. PAGE, Sennett, N. Y.

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THIRTY PAGES OF NEW MATTER,
with the experience of 1860 and '61, being the most important part of the work. Indispensable to all GRAPE GROWERS. Sent by mail, free of postage, on receipt of the price, 50 cents, in stamps. Address
WILLIAM BRIGHT, Box 138 Philadelphia P. O., Pa.
July 4—w&m3m.

THE CULTIVATOR FOR 1862.

FIFTY CENTS A YEAR.

NEW INDUCEMENTS FOR NEW SUBSCRIBERS.

Please Attend Early to the Formation of Clubs.

In order to secure the co-operation of our friends in extending the circulation of THE CULTIVATOR for 1862, at a sufficiently early period to secure a large list to begin the New Year with—we propose to send the remaining Numbers of the present volume to all new subscribers whose subscriptions are received before its expiration. Thus subscriptions for 1862 received before the issue of our next number, will receive the November and December numbers of 1861 in addition to the coming volume complete—making

Fourteen Months in a Year!

And subscriptions received during December previous to the issue of the January number will have THIRTEEN MONTHS IN THEIR YEAR. We have also determined to offer THE CULTIVATOR by itself as follows:—

Eight Copies for Three Dollars.

To the person making up a club of Eight at this rate, a copy of the ANNUAL REGISTER for 1862 will be sent as a PREMIUM.

The Cultivator and Annual Register

will be clubbed together as heretofore at the following rates:

ONE COPY OF CULTIVATOR AND REGISTER for 1862, SEVENTY-FIVE CENTS. TEN COPIES OF EACH, FIVE DOLLARS.

☞ To the person making up a Club of Ten at this rate, a copy of both the CULTIVATOR and ANNUAL REGISTER for 1862 will be sent as a PREMIUM.

The reader is referred to page 338 of this number of THE CULTIVATOR for an advertisement of the ANNUAL REGISTER for 1862, which will be ready to send to all subscribers entitled to receive it as fast as the clubs are filled up. It sells by itself for 25 cents per copy, or Two Dollars per dozen, at which rates we prepay the postage. The character of the coming number, both for the value and variety of its contents, and the profusion and beauty of its illustrations, is equal if not superior to that of any preceding one.

Remember then, if you please, that the Cultivator for 1862 may be had in Clubs of Eight at Thirty-Seven and a Half Cents per Copy; and the Cultivator and Register in Clubs of Ten at Fifty Cents per copy for both; and that all new Subscribers received during the coming two months will receive one, or two extra papers!

Old subscribers who renew will also be entitled to an equal number of extra papers, if they will, after perusing them be so kind as to distribute them among those who will be likely to subscribe for 1862. Numbers of either the CULTIVATOR or COUNTRY GENTLEMAN, as they may prefer, will be furnished for this purpose.

SUBSCRIBERS IN THE BRITISH PROVINCES will add to the foregoing terms Six Cents for each copy of THE CULTIVATOR ordered, to pay American Postage to the lines.

☞ Please send for Specimen Numbers.

☞ Say a kind word for THE CULTIVATOR among your neighbors.

THE PRESENT AND COMING VOLUMES.

We may refer with no littlle pride to the character of the Current Volume, which, so far from any abatement of interest from the 27 which have preceded it, only seems to grow more and more rich and fruitful with increasing years. We shall use our utmost endeavors to sustain and advance the leading position it has always occupied as the BEST OF AMERICAN AGRICULTURAL JOURNALS AT ITS PRICE.

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The Editorial Labor bestowed upon its columns increases every year.

It should be read by Hundreds of Farmers in every County and Town.

Large Clubs can be made up with little effort, if our friends BEGIN EARLY and are determined to succeed.

Prospectuses will soon be issued.

LUTHER TUCKER & SON,
October 1, 1861. Albany, N. Y.

"The Best of all the American Newspapers devoted to matters of Rural Economy."—SCOTTISH FARMER AND HORTICULTURIST, EDINBURGH, August 7, 1861.

THE COUNTRY GENTLEMAN:

A WEEKLY JOURNAL

For the Farm, the Garden, and the Fireside.

Volume XIX—January 1, 1862.

THE COUNTRY GENTLEMAN is now acknowledged to be the LEADING AGRICULTURAL JOURNAL OF AMERICA. It contains 16 pages in each number—forming two handsome volumes per year, of 832 pages, and not too large a page for convenient binding.

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Address, with your own name, or that of any friend, for this purpose, the Publishers, LUTHER TUCKER & SON,
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THE FARMER'S LIBRARY.

We know of no works which afford so much Practical Information on the subject of American Agriculture, which can be procured for double the cost, as the Third Series of "THE CULTIVATOR," the 8th vol. of which is now completed. The price of the Eight volumes, handsomely bound in muslin, is 75 cents each at this office, or $1.00 each sent by mail, post paid. Either volume from 1 to 8, can be had separately at the same price. The Eight volumes will be sent per Express to any part of the country, on receipt of $6.

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advertisement

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THE CULTIVATOR.

THIRD] TO IMPROVE THE SOIL AND THE MIND. [SERIES.

VOL. IX. ALBANY, N. Y., NOVEMBER, 1861. No. 11.

THE TWENTY-NINTH YEAR OF THE CULTIVATOR.

CULTIVATOR OFFICE, ALBANY, OCTOBER 21, 1861.

FOR NEARLY THIRTY YEARS, or since the boyhood of many who have now grown gray upon the Farm, THE CULTIVATOR has pursued the even tenor of its way, visiting with every opening month the households of thousands of Farmers in every section of the State and Country, and still a favorite authority with some who have been its readers from the outset. When, nine years ago, a Weekly edition was commenced, in the publication of the COUNTRY GENTLEMAN, new facilities were acquired for adding to the usefulness of THE CULTIVATOR, at a diminished price; and while, in the present age of rapid movement and progressive effort, the more frequent issues of the former are preferred by those who take the deepest interest in Agricultural improvement, the extraordinary cheapness of THE CULTIVATOR, coupled with its convenient form for the Library, and the vast amount of strictly practical information which it compresses into small compass, give it a place of its own in our periodical literature in which it has scarcely a single rival. For popular distribution, either in voluntary Clubs or by Agricultural Societies, it is calculated to do great good, at a very small cost; no farmer can, in reality, afford to be without it—for, if he takes no other Agricultural Paper, he will find its columns full of instruction and interest, and if he is already a reader of other Journals, the very small expense of adding THE CULTIVATOR to their number, cannot fail to be amply returned in the hints it will afford him long before the expiration of his year's subscription.

The publishers refer to the present volume of THE CULTIVATOR as proving that it still remains faithful to the great end with which it was established, "to improve the Soil and the Mind." Its contributors were never more numerous; and the surveys of Farming in various localities, from the pens of its Editors and others—of which we may refer to the articles on the Agriculture of Chester County in Pennsylvania, of Chenango, Otsego, Cayuga and Monroe Counties, in this State—have been a feature of much interest. Specimen copies will be gladly supplied for gratuitous circulation. And the hope is confidently expressed that the general Agricultural prosperity of the Country at the present time, amidst the confusion of an unprecedented war, will secure from all who are desirous of promoting the Farmer's welfare, a hearty response to the present appeal in behalf of a friend of so long standing and tried character, as THE CULTIVATOR. Without such co-operation from the promoters of Agricultural improvement, its circulation cannot be maintained; upon their assistance it has always been dependent, and the annual presentation of its claims upon their regard has never yet been made in vain.

Upon another page of this paper will be found the Terms and Prospectus of both THE CULTIVATOR and THE COUNTRY GENTLEMAN, and the aid of every reader is earnestly solicited in bringing them to the notice of his neighbors, and in making up Clubs for the New Year. At every post office to which THE CULTIVATOR is now sent, the list might be doubled or tripled, with very little exertion on the part of the Postmaster or of any individual subscriber.

THE ILLUSTRATED ANNUAL REGISTER OF RURAL AFFAIRS FOR 1862, which is presented to each subscriber to THE CULTIVATOR at fifty cents a year, *in Clubs of Ten or more*, forms a beautiful and appropriate New Year's Gift. Sample copies, for use in making up Clubs, will be sent upon application.

☞ It will be remembered that THE CULTIVATOR and REGISTER are both sent free to every one making up a Club of Ten subscribers and inclosing us Five Dollars for the same.

All subscriptions must be paid in advance.

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Address, LUTHER TUCKER & SON,
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Whatever other Agricultural Journals the Farmer may take, the Cheapness and Value of The Cultivator render it indispensable.

THE CULTIVATOR.

TO IMPROVE THE SOIL AND THE MIND.

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THE WIDEST INTEREST AND MOST GENERAL UTILITY.

It has long been the belief of the Editors, that what one Farmer has done another can do—hence their aim is to transcribe, either themselves or through their Correspondents, the exact systems which the best and most successful of our Farmers are now practically following, by which they have made money and enriched their soils—to explain the modus operandi, and set others in the way of following the example. We may assert, without exaggeration, that it contains scarcely a page, from January to December, on which may not be found some Fact from the Actual Practice of the writer, of far greater real value to the careful reader than the year's subscription.

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☞ Subscribers in the British Provinces will add Six Cents each to the above Terms, to cover United States Postage to the lines.

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Address letters of inquiry, or orders accompanied with the cash, to

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The Third Series of the Cultivator was commenced in 1853, from which time all the volumes can now be supplied. Price, bound in muslin, if sent by mail, postpaid, $1—if sent by Express, or otherwise, at the expense of the purchaser, 75 cents. The nine volumes, completed with December, 1861, may be had for $6.75, and constitute

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In themselves—furnished as they are each with a complete Index, and presenting the collective information and experience of so many Practical Farmers.

NAMES.	POST OFFICE.

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THE COUNTRY GENTLEMAN:

A Weekly Journal for the Farm, the Garden, and the Fireside.

This Journal was commenced in 1853. The Variety, Soundness, and Practical Nature of its Contents, not less than the strictly National character of its circulation, have rendered it the Favorite Authority of the Best Farmers, in all parts of the country, and the Repository of the most Valuable Results of their Experience. No expense or pains have been or will be spared, by its Editors and Publishers, to place it

BEYOND COMPETITION,

In the extent and interest of its Correspondence—Domestic and Foreign—in its Illustrations and general Typographical execution. It is intended to elucidate

The Economy and Practice of Field Husbandry,

In all its branches, including Grain, Root and Grass crops, and all the Processes of Improved Farming, such as Draining, Rotation, and Irrigation.

AS A STOCK PAPER, it will give special attention to the interests of Breeders and Feeders—discussing the relative merits of the different Breeds, and the General Management and Care of Domestic Animals, the Prevention and Cure of their Diseases, &c.

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Minor Departments are devoted to the Dairy, the Apiary, the Poultry Yard, Rural Architecture, Entomology and Domestic Economy—including, from week to week, more or less in each, and always from the best sources. All that pertains to the Embellishment, Comfort and Entertainment of the Rural Home, is considered within its appropriate sphere.

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Is also presented as to all that is progressing in the Agricultural world—the Proceedings and Shows of Societies, New Books, Implements and Manures—ever keeping an eye open to the real interests of the Agricultural Classes, and a pen ready to expose the humbugs of the day.

The Country Gentleman contains 16 large pages every week—making two yearly volumes of over 400 pages each ! furnished at the low price of $2 a year, or $2.50 when not paid in advance. Subscriptions commence at any time.

The Country Gentleman and the Annual Register for 1862.

Terms to Clubs.—The price of a single copy of each, to one person, is $2.25 ; two copies, $4 ; four copies, $7 ; eight copies, $13, and any larger number at the same rate, which includes the Postage on the Register. Where, however, the subscribers are already supplied with the Register, or do not wish it, we will send the Country Gentleman alone as follows:—Three copies for $5 ; five copies, $8 ; ten copies, $15. New volumes begin with July and January, each year, the 19th commencing with January 1, 1862.

☞ Subscribers in the British Provinces will each add twenty-six cents a year to the above terms, to cover United States Postage to the Canada lines.

LUTHER TUCKER & SON, Albany, N. Y.

The Country Gentleman is the name of, without question, the Best Agricultural Paper in the United States. It is devoted to Practical Husbandry, Agricultural News, Rural Architecture, Grazing, Horticulture, Fruit Culture, the Kitchen and Flower Gardens, Housewifery, the Dairy, Poultry Yard, Fireside, &c., &c. It is illustrated with superior engravings, and in fact combines, in one large sheet, an Agricultural, Horticultural and Family Journal.—*Chicago Democrat.*

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Over 300 sorts, the best American collection we know of, lasting over two months in flower, mostly $1 to $2 per 100, &c., &c.

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SILVER-LACED BANTAMS & GOLDEN CRESTED

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FLIRT—bred by Col. Motley, 9 years old,	$280.00
One 2 year old Heifer—to calve next spring,	125.00
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Be sure the seals are found unbroken.
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